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ABSTRACT

Training in the motor vehicle repair and sales sector in the Netherlands was examined in a study that included the following approaches: review of the sector's structure/characteristics, institutional and social context, employment practices, changing conditions, and available education and training; in-depth case studies of four auto repair shops and dealerships (two small, one medium-sized, and one large firm); and identification of economic, employment, and training trends. It was discovered that, in response to stagnation of the Dutch motor vehicle sales and repair industry in the 1990s, both the Dutch government and the industry have increased their commitment to vocational training and inservice courses and have created a training infrastructure that compares favorably with those of other sectors in the Dutch economy. All four businesses studied in depth were managed by individuals who were very involved in training, had access to good facilities and opportunities for on-the-job teaching/training, and could avail themselves of good external provisions for inservice training. Quality of service was an important element of training philosophy. Training needs were not always analyzed in a very structured way, and none of the businesses studied evaluated systematically the costs/benefits of training. Contains 20 references and 19 tables/figures. (MN)

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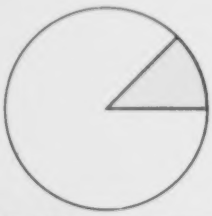

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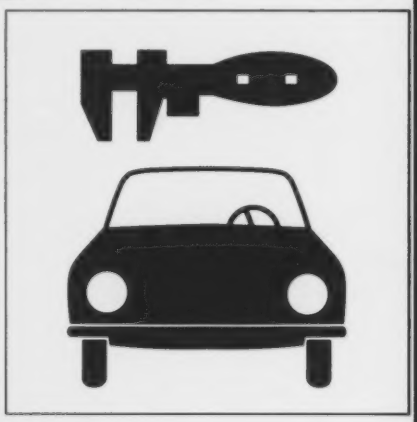

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MOTOR VEHICLE REPAIR AND SALES SECTOR

TRAINING IN THE MOTOR VEHICLE REPAIR AND SALES SECTOR IN THE NETHERLANDS

REPORT FOR THE FORCE PROGRAMME

drawn up by
John Warmerdam
in collaboration with
Harry van den Tillaart and Jacqueline Bosker,
Institute of Applied Social Sciences (ITS)

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Commission of the European Communities
TASK FORCE
Human Resources, Education, Training and Youth
Rue de la Loi, 200; B-1049 Bruxelles

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European Centre for the Development of Vocational Training
Jean Monnet House, Bundesallee 22, D-10717 Berlin

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ACKNOWLEDGEMENTS

As part of the European Community FORCE programme, a sectoral survey has been made of trends in employment, work and training in the European motor vehicle repair and sales sector. This report describes developments in the Netherlands. The report is divided into three parts. The first part gives an overview of the sector and describes current developments in employment, technology, work, education and training on a sectoral level. The second part contains four case studies of companies that are very active in the field of training and can act as examples for other companies inside the sector and beyond. The third part, the closing chapter, draws conclusions and gives a summary of the findings of the sectoral survey and the four case studies.

The Dutch study was prepared and monitored by the central team, which was responsible for the coordination of the national sectoral surveys in the twelve EC Member States. This team consisted of members of research centres that participate in the EURONET Work & Education. The "Institut für Technologie und Bildung" (ITB) of the University of Bremen had overall responsibility for the project. The central team was made up of: Felix Rauner and Georg Spöttl of the ITB, Kaj Olesen and Bruno Clematide of DET in Copenhagen, Skevos Papaioannou of SRC in Athens and Oriol Homs of CIREM in Barcelona. The central team cooperated closely with Tina Bertzeletou, project coordinator in CEDEFOP, Berlin.

The Dutch survey was carried out by research staff of the Institute of Applied Social Sciences (ITS) in Nijmegen. John Warmerdam was responsible for the project. He compiled the sectoral survey and three of the case studies. Harry van den Tillaart carried out the case study of the FORD company. Jacqueline Bosker assisted and gathered information for the sectoral survey. Organizational support was given by Theo Reubsaet of the ITS and Jos Tilkin of the CIBB, the Dutch National Coordination Unit for the FORCE programme.

We would like to take this opportunity to thank the companies which participated in this survey. Without their willingness to cooperate, the survey would not have been possible. We appreciate the time and energy they devoted to this.

We would also like to thank the employers and employees of organizations which provided support for the survey. Members of these organizations were involved in selecting case studies and validated the results in the final report. Particular thanks go to:

the Stichting OOMT;
the Stichting INNOVAM;
the employers' organization BOVAG;
the Industriebond FNV; and
the Industrie- en Voedingsbond CNV.

We hope this report will provide these organizations with useful information for developing training policies in their sector.

Dr. A. J. Mens

General Director ITS

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SECTORAL CONTEXT

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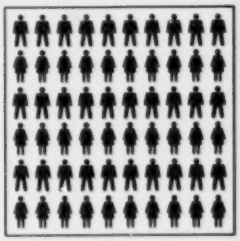

1. Structure and characteristics of the motor vehicle sector
2. Institutional and social context
3. Employment and labour
4. Changing conditions and implications for skill requirements
5. Education and training

Annex

1. STRUCTURE AND CHARACTERISTICS OF THE MOTOR VEHICLE SECTOR

1.1 Structure of the sector

Within the motor vehicle industry in the Netherlands, we can identify a number of categories of company according to their principal business activities. Diagram 1 shows the structure of the sector. Table 1.1 gives an overview of the number of companies by category for 1977, 1983, 1989 and 1990. In 1990 motor vehicle companies are classified by type: dealers, general motor vehicle business, the second-hand car trade and repair shops (garages). This detailed information is not available for preceding years. Furthermore, it is not always possible to differentiate exactly between the different categories. Almost all companies carry out repair work. Most general motor vehicle businesses sell both new and second-hand cars. In the figures presented, where a company both sells and repairs cars, it is classified as a repair company when the repair work accounts for more than 10% of its combined sales and repair turnover (20% for second-hand car dealers); in all other cases the company is included in one of the car sales categories. Table 1.2 goes on to give an idea of the number of companies in various branches that are not motor vehicle repair or sales companies, but which are still included in the motor vehicle sector.

Companies in the bodywork sector are excluded from this sectoral study. A great number of these companies are in fact manufacturing companies which also carry out bodywork repairs. The work carried out in these companies (sheet metal work) is of a completely different nature to that carried out in the repair shops (repairs). In addition, the bodywork sector has a structure all of its own, with its own employers' federation, separate collective regulations governing working conditions and its own infrastructure for training and further education.

1.2 Size of the sector

Leaving aside bodywork companies, there were, in 1990, 12,000 companies in the motor vehicle repair and sales sector. This is a considerably higher number than at the end of the seventies, owing to the growth in the motor vehicle sector in the eighties. This can be accounted for largely by the growth in the number of cars on the road. The number of cars registered in the Netherlands rose from 4.2 million in 1977 to nearly 6 million in 1990. The turnover of motor vehicle companies in the sector also rose in the seventies and eighties, with a small dip in the recession years of '80 and '81 (see tables 1.4 and 1.5 for the shares of different makes). In 1987 the sector attained a peak turnover of NLG 36.4 billion or approximately 8.4% of the Dutch gross domestic product. In 1988 turnover fell by 9% to around NLG 30 billion, but since then it has increased slightly (EIM 1990). The development of turnover in the sector is heavily influenced by developments in trading activities. In 1987 new car sales accounted for 50% of total turnover, with another quarter coming from the sale of second-hand cars. The share of repair shop activities is a very modest 4–5% (RABO, 1989). Growth in the number of motor vehicle companies is expected to even off in the coming years with stagnation in the number of car sales. The number of new registrations varied considerably in the eighties with a low of 390,000 in 1980 and a peak in 1986 of 560,000. This figure has steadied at around 500,000 during recent years and is not expected to rise much in the foreseeable future. Little increase is expected in the number of cars on the road and replacement demand is likely to come under pressure due to the longer average life expectancy of cars. The current life expectancy of a car in the Netherlands is just over 10 years, compared with just 8.2 years in 1978 (EIM, 1989; RABO, 1989). The rise in the average life expectancy of vehicles, also a reflection of the improved quality of newer cars, will also have an effect on the amount of work for repair shops.

Most motor vehicle businesses fall into the SME category. According to figures from the chamber of commerce, the breakdown by size of business in 1990 was as follows:

0 – 4 employees – 70%
5 – 9 employees – 15%
10 – 50 employees – 11%
50 + employees – 0.5%
figures not known – 3%

According to the Dutch Central Statistics Office, the growth in the eighties came largely from smaller businesses, i.e. those with less than 10 employees (see table 1.3). In total there were 12,000 of these businesses in 1991, in which some 70,000 people were working. 40% of these businesses reported no employees other than the entrepreneur himself (RABO, 1989).

1.3 Types of company

Importers play a very important role in the Dutch motor vehicle industry. For new car sales, the Netherlands has a system of selective distribution, with the distribution of cars through importers' national sales networks. There are about 30 car importers. A number of them belong to manufacturers, the others are independent (RABO, 1989). Each importer signs contracts with a dealer network, giving the dealers the exclusive rights to sell a make of car within a specified area. The dealer contracts, which are renewed each year, contain all kinds of agreements concerning the number of cars to be sold, stocks to be held, warranty arrangements, sales and marketing etc. In many cases they also include agreements on training. The importers take responsibility for the national advertising campaigns and offer dealers various types of support in areas such as management, administration, sales and training of staff. These tied dealers have the advantage of trading in a relatively protected marketplace; in their area

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they will find no competitors selling the same make. However, the needs of dealers and importers do not always coincide. Importers often come under pressure from manufacturers to increase sales. In their turn, they tend to put additional pressure on their dealers. All sorts of incentives are introduced to boost sales, most of which mean lower profit margins for the dealers.

With the disappearance of internal European borders in 1992, we can expect the role of the importers to become less important. We can expect to see more large-scale distribution and more direct relationships between dealers and manufacturers. The import organizations which currently fulfil a primarily wholesale function can be expected to assume a more commercial role and offer dealers increased support in areas such as management, supervision, training etc. The relationship between importer and dealer will become somewhat looser. This could also mean dealers no longer being bound to one particular make, but being able to sell different makes. This is already the case for makes which are not mutually competitive (Amro, 1988, NEI, 1988; RABO, 1989, ABN, 1989).

In 1990 there were 4,300 dealers in the Netherlands. The principal activity of these companies is, obviously, selling new cars. We find dealers in both passenger cars and commercial vehicles. Some dealers trade in both kinds of car. Dealers will sometimes use other (sub)dealers to sell within their areas. In addition to selling new cars, dealers frequently provide maintenance and repair services, mostly for the same make, and also deal in second-hand cars. Most dealers are legally independent entrepreneurs. Nonetheless, in running their companies, they are tightly bound to the terms of their dealer contracts (RABO, 1988; ABN, 1989).

In the general motor vehicle business sector, the proportion of repair and maintenance work is mostly greater than in the dealerships. These companies handle a variety of makes, most of them older models, as most people buying new cars take them to their dealers for servicing in the first few years. General motor vehicle companies also sell cars, but largely second-hand cars. They rarely have large and expensive showrooms and do not need to keep stock, which enables them to keep their running costs significantly lower than those of average-sized dealerships.

General motor vehicle companies have, over the last ten years, lost a share of their business to specialized repair companies. These companies offer parts and component repair work. An important group in this sector are the accident repair shops. Another large group are the so-called 'quick-fit' companies, that is, service stations which carry out relatively simple repairs such as replacing batteries, putting in new exhaust systems or fitting new tyres.

The dealerships' share of the maintenance and repair market is relatively high; 55% in 1981 and 54% in 1987. Non-dealerships increased their share somewhat over this period from 9% to 13%. The percentage share of specialized car companies and other companies also remained stable (from 11% to 13% and from 13% to 12% respectively). Motor vehicle companies and specialists can be expected to retain and even increase their market share over the coming years (BOVAG, 1987).

A completely new group to enter the marketplace are the car leasing companies. This group has grown significantly in the Netherlands over the past few years. The sale of passenger cars to leasing companies currently accounts for more than 20% of the whole new car market. The arrival of these and other 'fleet-owners' (companies with their own car fleets) has led to a concentration of purchasing power in the hands of a small number of market players and thus to a relative weakening of the position of the motor vehicle sales companies. Fleet-owners can usually negotiate favourable conditions for the purchase and servicing of their fleets, with subsequent negative effects on the motor vehicle companies' margins. On the other hand, leased cars are serviced more frequently and the higher number of cars sold keeps sales costs down. Moreover, motor vehicle companies can offer their own leasing services, and a significant number already do so. In 1988 one-third of car companies offered their own leasing arrangements (RABO, 1989).

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2. INSTITUTIONAL AND SOCIAL CONTEXT

Various developments in national legislation and regulations have had an effect on training policy in the motor vehicle industry. These include not only recent economic and labour legislation, but also current developments in environmental, (traffic) safety and educational legislation.

2.1 Establishment policy and economic strategy

A very important instrument of economic policy for Dutch companies is the Company Establishment Act (Vestigingswet) of 1954. This law influences the entry of new entrepreneurs into a particular sector, laying down specific minimum qualifications with regard to skills and business know-how for anybody wishing to set up business. The motor repair and sales sector falls under four separate sets of establishment regulations: for the car industry, the motor vehicle industry, bodywork (repair) companies and tyre servicing companies. Establishment regulations for the currently unregulated car breaking industry are currently being developed. To establish a company in the motor vehicle industry, an entrepreneur must hold two diplomas, the Car Industry Proficiency Diploma (Diploma Vakbekwaamheid Autobedrijf) and the Practice of Commerce Diploma (Handelskennis) or Small Business Diploma (Middenstandsdiploma). Both employers' training programmes are carried out by INNOVAM, the training institute for the sector (see paragraph 5). The Car Industry Proficiency Diploma can be required for running a second facility of an existing company. This diploma is also a requirement for anyone wanting to set up a motorbike sales and repair company.

The Company Establishment Act is currently under heavy discussion. The government is considering loosening its provisions, which many see as severely hampering the development of the industry. The detailed regulations based on the legislation are viewed as unnecessarily limiting the opening of new companies and presenting unnecessary obstacles for existing companies that want to expand into new or related sectors. Someone starting a business or expanding within a limited part of a business activity must currently hold a 'complete' diploma. For example, an entrepreneur specializing in maintenance or replacement of shock absorbers needs a diploma for the (whole) motor vehicle industry. According to the government, the professional skills requirements could be scrapped from the Company Establishment Act. The motor vehicle industry employers' federation (BOVAG) in part supports the government's proposals for easing the Company Establishment Act. The industry organization wants to see a general proficiency requirement made a legal requirement for entrepreneurs in all sectors which it represents; in their eyes, this will increase the quality of entrepreneurship. At the same time it wants to see legal provisions for industrial technology, ideally joint regulations for car, bodywork and tyre servicing companies, and eventually including the motorbike industry. Employers also want a legal guarantee that each car company will include a senior qualified engineer with the required technical skills. Only when legal provision to safeguard professional proficiency has been made elsewhere is the organization ready to accept a new establishment act without a professional proficiency requirement (Ministry of Economics, 1992). The Company Establishment Act is still a matter of heated debate; a final decision is not expected until a later date. Whatever the outcome of these decisions, they will certainly have implications for the content and organization of the training of entrepreneurs in the industry.

2.2 New environmental and safety legislation

Companies in the motor vehicle sector are also confronted with new environmental legislation and regulations. In this area there is talk of tightening policy and regulations governing the organization of business premises (Nuisance Act), processing materials and waste (oils, paints, batteries) and exhaust emissions. Both motor vehicle and repair companies will have to meet stricter standards; and entrepreneurs and company employees will be required to have specific qualifications in this domain. For employers in the car breaking sector, the new environmental legislation is one reason militating in favour of introducing a specific establishment act for the sector, providing certification for car wrecking companies and for developing a new, recognized "car demolition expert" training course. These stricter environmental demands should speed up the development of new motor vehicle technology, more specifically fuel distribution and motor adjustment systems. This should also add further momentum to the already fast-moving introduction of electronic components (see section 4) and to the need for training in this sector.

New regulations governing vehicle safety are putting more and more demands on the motor vehicle industry. For some years now, Dutch drivers have been obliged by law to have cars which are more than three years old inspected by a recognized inspection station. Car repair companies may carry out this Regular General Inspection (APK), providing they are officially approved as APK stations. This approval can be obtained only if the company employs a person with a master's certificate in "motor inspection". A motor inspection course has just been set up especially for this and many motor vehicle companies are already taking advantage of it. The role of motor inspector has gradually developed into a new type of function within the motor vehicle repair industry. Plans are currently under discussion to introduce similar, legally binding general environmental inspections alongside the APK. If the plans go ahead, this will greatly stimulate training in the motor vehicle industry.

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2.3 Changes to labour legislation

The motor vehicle industry also faces changes in Dutch employment legislation. The most important element involved here is new legislation on work relations, working conditions and employment measures.

In 1979 a new statute governing works councils (WOR) came into force, regulating employee relations and in particular employee participation in company management. The statute gives employees or their representatives in the works council certain rights and a say in employers' corporate decisions. The works council can have a far-reaching influence depending on the decisions in question. As far as the rules and regulations governing personnel management are concerned, the works council has a so-called "right of endorsement". The employer can implement a measure proposed in this area only if the works council has given its endorsement. All kinds of regulations on training policy also fall under these rules. The WOR only has a limited influence in the motor vehicle sector, as the statute only applies to those companies employing 35 or more people, whilst a more limited system applies to smaller companies (10–35 employees). Many companies in the motor vehicle sector are so small that they are only partially subject to the rules, if at all.

Between 1982 and 1990 new legislation on working conditions was introduced. The Working Conditions Act (abbreviated Dutch title: "Arbowet") comprises a complex collection of conditions covering the protection and promotion of safety, health and wellbeing in the workplace. A number of recently introduced articles relating to 'well-being' in the workplace require employers, amongst other things, to take account of the qualifications and potential for developing qualifications of their personnel when organizing work, installing work places and defining production and work methods. Employers must take account of workers' personal qualities, including their occupational skills, when defining and allocating tasks. The work an employee carries out should, as far as can reasonably be demanded, contribute to improving his or her occupational skills. All motor vehicle companies fall under this legislation. The Arbowet should, in the coming years, have a certain influence on organization, staffing and training, especially in larger companies. The legislation is also intended to help reduce the volume of persons registered as unemployable in the Netherlands. There is a need both for measures to avoid more workers becoming disabled and for measures to reintegrate disabled (e.g. handicapped) workers. Both types of measures require employers to pay more attention to "weaker" groups of employees in their personnel policies; this can be achieved through adapting jobs and work places as well as retraining, further training and in-service training. A third pending change in working conditions relates to the maximum working hours of employees. This legislation is currently under review with a view to permitting more flexible working hours.

An important institutional change is the updating of employment measures in the Netherlands. With the new Employment Stimulation Act which came into force in 1992, the task of finding new jobs for unemployed persons, previously handled by the central government, was split into three and regionalized. The regional employment offices have come under tripartite management, i.e. government, employers and trade unions and have gained greater freedom to create tailor-made policies to meet the specific needs of their regions. Through participation in local-level management, (organized) employers and employees now have a much more direct influence on major job creation issues: job finding, careers advice and education for employees and people looking for work.

2.4 New developments in training legislation and policy

Numerous developments in training legislation and training policy, in particular vocationally-oriented adult education, are influencing training activities in the motor vehicle sector. Recently various national policy activities have been implemented with a view to improving interaction and cooperation between different vocational training establishments and between vocational training and in-service training, to improving cooperation between vocational training and professional practice, and to making the training system more market-oriented. An important result of these operations is that both sides of industry have become more involved in determining the contents and direction of professional education and (dual) vocational training in their sector. Sector-specific "education-business life consultation bodies" provide a forum in which they can discuss the structure, content and ultimate objectives of training programmes. Vocational training schools and apprentice training establishments have also been given a greater opportunity to offer training courses or training modules on the market. This has led to the creation of a new 'contractual training' segment, in which normal teaching institutions offer courses (standard or tailor-made) on a contract basis and against payment to interested parties, e.g. a company, group of companies or an employment agency. In this way, public education institutions become part of the private education sector. The greater programme and procedural flexibility of vocational training and apprenticeship schemes has opened up a new world of potential cooperation between educational establishments, companies and business sectors. In the motor vehicle industry as well, everyone is busy exploring the opportunities offered by this new structure (see paragraph 5 below).

2.5 Employers' and employees' organizations

Regulations are imposed both at the national level and within the sector concerned. The conditions of employment in the motor vehicle sector are laid down in a collective employment agreement (CAO) for the motor vehicle and motorcycle industry. The two most important employers' organizations in the sector, the Bond van Garagehouders (Union of Garage Owners) (BOVAG), and the Nederlandse Christelijke Bond van Rijwiel- en Motorhandelaren (Dutch Christian Union of Motorcycle and Motor Vehicle Dealers) (NCBRN), as well as three employees' organizations: the FNV Industrial Union, the CNV Industrial and Food Union (Christian), and the BLHP Union, are all party to this collective employment agreement.

BOVAG is the largest employers' organization in the sector (with a total of approximately 13,000 members). The union has seven sections for motor vehicle businesses, motorcycle businesses, car hire, caravan businesses, driving schools, petrol and service stations and mechanical repair centres. The BOVAG department for motor vehicles comprises over 7,400 motor vehicle businesses (private cars and commercial cars) in the Netherlands, including all the official dealers (approximately 4,300). Altogether 95 per cent of all the legally established motor vehicle businesses are affiliated. The department acts as a representative in the sector in contacts with manufacturers and importers, the government, and employee and consumer organizations. There are a number of special commissions, such as the dealer commission, the repair and service commission, the bodywork repair commission, and the second-hand car commission, which support the members in specific areas of business management. BOVAG participates in all sorts of national and international forms of co-operation.

Of the three employees' organizations, the FNV Industrial Union is the largest in terms of membership; most employees in the motor vehicle sector belong to this organization. The CNV Industry and Food Union is an industrial organization with a Christian basis, which cooperates closely in practice with its non-denominational sister organization. The third union, the BLHP Union, aims in particular to promote the interests of middle and higher levels of management.

2.6 Training provision in the sector

In recent years, management and unions have arrived at a number of agreements on training policy in the sector which are laid down in the collective employment agreement. The agreements on day release for training, and a training fund for the sector, are of particular importance. It is partly because of these two arrangements that, in comparison with other sectors, the motor vehicle sector has built up a relatively powerful training infrastructure.

Day release provisions for training purposes have been in force for a number of years. Under this system, every employer is awarded a number of days for training every year, which is equivalent to the number of staff employed by him in that year. These days can be used for training or courses aimed at maintaining and/or broadening or increasing the employees' knowledge and/or skills which are necessary for the exercise of their present and/or future job in the employer's company. The training and courses eligible in this respect are determined by the management of the sector's training fund. The employer gives employees the opportunity to undergo training while continuing to pay their salaries, and for this purpose determines a training timetable for each calendar year, in consultation with the works council, representatives of his staff, or the employees themselves. The employer organizes the participation of his employees in consultation with the organization providing the course, and the costs incurred by him are reimbursed by the sector's training fund.

Since 1990, the sector has had its own training and development fund, which is financed by a government subsidy and the income generated by CAO contributions in the sector (0.55 per cent of salaries). This fund, the Stichting Opleidings- en Ontwikkelingsfonds Motorvoertuigen en Tweewielerbedrijven (Foundation for the Training and Development Fund for the Motor Vehicle and Cycle Industries (OOMT)) is a form of co-operation between employers and employees, aimed at improving the sector's professional skills. The foundation has three tasks: partial or entire financing of activities and projects which generate employment, the training of young people and others for the benefit of this branch of industry; the establishment and organization of training and/or courses aimed at instilling, maintaining, broadening or deepening the employees' knowledge and skills; the implementation of a common training policy and its whole or partial financing. The FNV Industrial Union, the CNV Industry and Food Union, and the BLHP Union represent the employees in the OOMT; the BOVAG and the NCBRM represent the employers. The OOMT does not employ any personnel itself. The policy of the OOMT is formulated and executed by the INNOVAM, the innovation and educational centre for the motor vehicle and motorcycle sector. For this purpose, the centre organizes courses and exams which are recognized by the sector and by the state (e.g. the occupational training courses for apprenticeships and the training for the business establishment diploma), and it provides a broad range of courses and training in fields such as management, electronics, the environment, and commercial skills. In addition, the centre serves as an

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information centre for the sector (also see paragraph 5). In 1991, INNOVAM set up a "think tank", consisting of a group of top experts, representing importers, manufacturers and universities, who regularly advise the OOMT on long-term training policy on the basis of research in markets, technology and management. The OOMT/INNOVAM are endeavouring to achieve a more policy-oriented approach towards training in the motor vehicle sector. The first three-year plan for a training policy was presented recently.

2.7 Training provisions for importers

In addition to BOVAG, another employers' organization plays an important role in the sector, viz., the RAI, the Nederlandse vereniging Rijwiel- en Automobielindustrie (Dutch Association for the Motorcycle and Motor Vehicle Industry). The RAI brings together, inter alia, motor vehicle manufacturers and importers. The importers in particular have traditionally played a large part in the training activities in the sector; they take care of the largest proportion of private "industrial training courses". Many importers have their own training centres, and the contracts which they conclude with their dealers usually include agreements on training and in-service training. Some importers work with INNOVAM, usually in a bilateral context, for example, in joint training projects. However, the RAI does not participate in the CAO consultation, and in that sense, it is not considered as one of the social partners, and is therefore not represented in the management of the OOMT. Recently the RAI has started, as a matter of policy, to devote more attention to training, and has also endeavoured to arrive at more structural co-operation with BOVAG and the OOMT. For this purpose, the RAI has introduced its own training commission, in which INNOVAM participates as an observer. In addition, the OOMT has assigned the RAI an advisory function for determining the training policy of the sector. However, cooperation between the RAI and OOMT/INNOVAM is still in its infancy.

Section 6 examines in greater detail the actual training activities in the motor vehicle sector and the role of the different institutions (public, dual, private) in this respect. Before this, we will first discuss the most important developments in employment, work, the market, technology and organization and their implications for the job structure, qualifications, and the training requirements in the sector.

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3. EMPLOYMENT AND LABOUR

3.1 Employment

Table 3.1 gives an overview of the numbers employed in the various branches of the industry. In 1990, a total of over 70,000 people were employed in this sector. In comparison with previous years, there is still some growth in employment. Following a slight fall in the employment figures at the beginning of the 1980s, a time of economic decline, the employment situation in 1990 was better than that in the late 1970s. The economic recovery during the second half of the 1980s also had its effects on the motor vehicle businesses. The current growth in employment is found particularly in general motor vehicle businesses and repair shops. Motor vehicle dealers and dealers in second-hand cars, accessories and parts show a slight fall in employment in 1990, compared with 1989.

Table 3.1 shows that the large majority of those employed in the motor vehicle sector are employed in (sub) dealer businesses. These are also the businesses with the largest number of employees per business. In motor vehicle businesses, about 6 people are employed on average in every business. The size of the business varies from an average of 13 people in dealer businesses to an average of 1.7 people for businesses dealing in second-hand cars (see table 3.2). The majority of businesses in the motor vehicle sector are medium or small. In 1987, the sector comprised only 15 large businesses, i.e. businesses employing 100 or more employees. Altogether these 15 businesses provided work for about 3,500 people (EIM, 1900).

The smallest businesses (fewer than 4 employees) are often self-employed people who employ one or two staff, sometimes with members of the family working in the business. (The average number of owners, partners and members of the family working in the business is greater than 1 in this case.) Dealer businesses and the retail trade often employ more people and less frequently have a (self-employed) owner. (Average number of owners, partners and members of the family working in the business is smaller than 1.) These are more often businesses which are owned by an importer.

It is expected that in the next few years employment in the motor vehicle industry will gradually decline as a result of a levelling off in the number of cars on the road, technological innovations and quality improvement of cars, and the increase in productivity in the repair shops. There are grounds for such expectations. As table 3.1. shows, the average number of cars produced per employee has increased from 65 at the end of the 1970s to 85 in the early 1990s.

3.2 Structure of personnel

Table 3.3 shows that the large majority of employees in the motor vehicle sector work more than 15 hours per week. This does not mean that they all have full-time jobs, but the figures do indicate that the motor vehicle sector is not characterized by substantial part-time employment. The number of part-time employees is less than 5 per cent. Moreover, it is not known precisely how many hours are worked by owners and members of the family who work in the business. It may be assumed that many owners work at least a full working week, while members of the family who work in the business usually work part time.

The average age in the motor vehicle sector is fairly low. It employs a relatively large number of young people, and relatively few people over the age of 45 (OOMT, 1988). This is largely attributable to the fact that people entering employment in this sector are fairly young. They are mainly school leavers. About 4 per cent of people leave the sector every year. This is a reasonable percentage, which is compensated for particularly by the entry of young school leavers, and to a lesser extent, by people coming in from other sectors, resulting in a fairly young workforce. One main factor accounting for the small number of people coming from other sectors is the fact that the motor vehicle repair sector has a fairly low status, so that it is not particularly attractive. On the other hand, experienced employees in the motor vehicle sector are of interest to businesses in other sectors, taking into account the level of their qualifications. Higher salary levels in some of these sectors draw the more experienced employees away from the motor vehicle sector.

The motor vehicle sector comprises a relatively large number of employees with basic technical training. In addition, there is a large group which has completed apprenticeships; in 1991, this accounted for 35 per cent. The number of employees with further education is fairly low. In 1991, 4 per cent of employees had a diploma of further technical or administrative education, and another 2 per cent had followed further education for a short time. The number of employees with higher education is very small. Only some of the large businesses employ people with higher technical qualifications.

The motor vehicle sector is a traditional domain of men. Mechanics, car body workers and business managers are jobs which are traditionally considered to be men's jobs. In fact, the percentage of women in this sector is very low. It is estimated at about 10 per cent, but the exact figure is not known. The majority of this 10 per cent can probably be found in administrative jobs, and in some cases, in sales departments. For a number of years the motor vehicle sector has been trying to attract more women, even for technical jobs, through special campaigns and measures designed to encourage women, but up to now these efforts have had little effect. This is due in part to the nature of the potential target group (too few

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women appear to be prepared to opt for a technical job in the motor vehicle sector), and partly due to the situation in the motor vehicle business. In a study of the ideal situation for experienced repair shop employees carried out by the sector in 1988, more than 70 per cent of motor vehicle business managers indicated a preference for men. Only 30 per cent had no preference for either gender (OOMT, 1988). This is a clear indication of the prevailing views, which hinder women from entering this sector.

No adequate information is available on the proportion of other special groups in employees as a whole in the motor vehicle sector, such as ethnic minorities and the handicapped, though it is known that the number of immigrant workers has increased in recent years, partly because of a number of special employment projects. For example, in 1991, 500 immigrants took up apprenticeships (of a total of almost 13,000).

3.3 Areas of employment and job structure

The different types of work in motor vehicle businesses can be roughly divided into five areas of employment: the repair shop, the stores, sales, administration and management. The KWW sector study (KWW, 1988) shows that, on average, the repair shop accounts for more than 50 per cent of the work, but the relative importance of the areas of employment differs, depending on the size of the business (see table 3.4). In small businesses, which account for a large proportion of general motor vehicle businesses, the importance of the repair shop is relatively greater than in larger businesses, while stores and administration are more important in larger businesses, although even here the work carried out in the repair shop still accounts for more than 50 per cent. In terms of the number of employees, the ratio of jobs in stores and in the repair shop in businesses with fewer than 10 employees is 1:26, while in larger businesses, it is 1:6.3; on average, the ratio is 1:8.6. The sales-repair shop ratio in small businesses is 1:4.3, and in large businesses 1:3; the average is 1:3.4.

The motor vehicle sector has a fairly homogeneous job structure. The study carried out by the sector in 1988 (KWW, 1988) identified the following jobs: business manager, manager/foreman, chief mechanic, mechanic, apprentice mechanic, instructor, bodywork mechanic/sprayer, receptionist, stores manager, stores assistant, sales manager, sales assistant, head of administration, and administrative employee. These jobs are not all represented individually, particularly in smaller businesses, where the different jobs are often combined in a single person or several people. The owner often works in his own repair shop and/or sales, and in many cases also takes care of (part of) the administration. In small businesses there is often no separate personnel for stores, but the stores form part of the repair shop. By no means all businesses employ sales personnel. Research has shown that 34% of business do not employ any sales personnel (KWW, 1988).

Table 3.5 gives a survey of the types of jobs for every area of employment, and of the (expected) development of the percentage share of these jobs in the total job structure. The figures are based on a forecast for future employment development drawn up for the sector in 1988 (KWW, 1988) in the context of its medium-term exploratory study. The survey shows that on the whole, the motor vehicle sector has a fairly stable job structure, in which the jobs of mechanic and chief mechanic are the most important. There is a trend for the chief mechanic's job to increase in importance at the expense of ordinary mechanics. The main reason for this is technological development, which means that the work of the mechanic is developing to a higher technological level. The table also shows that the jobs in administration and stores are becoming increasingly important. Within the different job categories there is very little important division of labour in the private motor vehicle sector. In general, the division of labour runs parallel to the hierarchy. It is only in larger repair shops that electrical and electronics specialists can frequently be found. In the larger businesses a distinction is sometimes made between sales of new and of second-hand cars. Specialist jobs are found more frequently in the heavy goods vehicle sector in electro-technology and electronics, as well as in areas such as pneumatics, hydraulics, construction and welding (KWW, 1988).

3.4 Labour and working conditions

Table 3.6 gives a survey of the sort of work carried out by the various employees in the repair shop, and of the (expected) developments in the 1988–1993 period. The information is taken from a time and motion study in 115 motor vehicle businesses (KWW, 1988). The activities are grouped in four main categories: customer relations, diagnosis/instruction, practical mechanics and management/administration. The category of practical mechanics covers a great diversity of maintenance and repair work, full service, interim service, holiday service, ordinary repairs, repairs to damage, and smaller tasks such as oil changes, engine tuning, battery changes, fitting new exhausts etc. Obviously customer relations also includes the sale of new and second-hand cars.

The table shows that mechanics in small businesses have a more varied range of tasks than mechanics in larger businesses. Apart from their practical mechanical work – which is also clearly the main part of their job – they have more contact with clients, are more involved with detecting faults and with instruction, and devote more time

to administration than their colleagues in larger businesses. Small businesses clearly have less of a division of tasks. The figures also show that the manager's job is very different in small and large businesses. In small businesses the manager often works alongside his employees, but in large businesses, he more often takes care of customer relations himself. This is attributable to the fact that large businesses include many more dealer businesses with large sales departments. Finally, when we look at the forecasts, there are clear trends. Customer relations is more time-consuming, particularly for the repair shop managers (and for instructors). There is an increase in diagnostic work, particularly for the chief mechanic, and this is at the expense of normal mechanical work. The changes expected in the instructor's range of tasks are striking. Both in large and small businesses, instructors will have to spend much more time on diagnosis and instruction. Furthermore, they will have to be involved in customer relations to a greater extent than at present.

Little data is available on the working conditions of employees in motor vehicle businesses. Some information about their own views of their working conditions is provided by a study carried out recently by the ITS of approximately 1,000 employees in small and medium-sized businesses (Warmerdam et al., 1992). Amongst other things, they were asked to evaluate a large number of aspects of their working situation. Of these 1,000 employees, 62 worked in a motor vehicle business, of whom 14 were car mechanics. In an analysis specially carried out for this study, the data relating to the working conditions of the employees in motor vehicle businesses were compared with the data on other employees. This comparison led to the following conclusions:

- In general, employees in motor vehicle businesses have fewer problems than other employees regarding the physical working conditions. However, there are three areas in which they have more problems. They suffer more frequently from heat, cold and draughts, from dust, dirt and pollution in the repair shop, and from noxious substances, gases and vapours.

- Employees in motor vehicle businesses list fewer problems than employees in other businesses with regard to the psychological workload. They are less troubled by matters such as working quickly, excessive overtime, monotony, and boredom. However, they state more frequently that they have too few opportunities to deal with problem situations themselves. This can be an important cause of stress at work.

- With regard to work content, employees in motor vehicle businesses are generally less positive than employees in other businesses. They indicate more frequently that they have too few opportunities to determine for themselves the rate at which they work, the work sequence, and the working methods. They also state more frequently that they are too often excluded from matters which concern their own work. Clearly, limiting autonomy at work is quite often a problem in motor vehicle businesses. Furthermore, compared with employees in other businesses, car mechanics in particular more often state that they have too few opportunities to apply and develop their knowledge and skills in their work; 57 per cent of car mechanics indicate that they have problems in this respect occasionally or even frequently, compared with 32 per cent of other employees. Despite the diversity of work for car mechanics, they still appear to be underemployed. This applies much less to other employees in the motor vehicle business (sales, stores, administration, bodywork, service station etc.).

However, it is important to be careful when attempting to draw far-reaching conclusions from these data. The numbers involved are too small, and it is not known to what extent the group that was studied is representative of the whole sector. Nevertheless, the figures provide some indication of working conditions in motor vehicle businesses.

3.5 Perspectives

To summarize, we can state that it is generally expected that the next few years will see a reduction and shift in the employment situation. The most important trend is: "less work, but work of a higher quality" (KWW, 1988). In a quantitative sense, the employment available will decline as a result of market saturation, the levelling off of the number of cars sold, and the reduction in the number of hours worked in the repair shop, as a result of improvements in the quality of cars on the road. In qualitative terms, a shift is expected in the repair shop to the present level of the chief mechanics. This is the result of the increasing technological complexity of systems and parts used in cars. In the coming few years, problems are expected to arise with the present generation of mechanics. An important question which arises in the sector is whether it will be possible to provide adequate in-service training, so that mechanics will be able to acquire new techniques. The next section will look more closely at current developments in jobs in the repair shop and sales, the job structure and qualification requirements. Section 5 will then examine training activities.

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4. CHANGING CONDITIONS AND IMPLICATIONS FOR SKILL REQUIREMENTS

1.

For a proper understanding of training activities, it is necessary to begin by looking at the developments which to a great extent determine the qualification requirements and training needs in the motor vehicle sector: technological developments, commercial developments, developments in job structure, and developments in the labour market. In a publication dating from 1988, the VAM (the predecessor of the INNOVAM), the sector's training centre, outlined the most important developments. The KWW study also devoted a great deal of attention to this. The following section is based mainly on these publications.

4.1 New developments in motor vehicle technology

Technological developments in the motor vehicle repair and sales sector are largely determined by developments in product technology – in this case, motor vehicle technology – and by developments in repair shop technology, particularly in measurement and testing equipment and computer technology.

From the point of view of product technology, the motor vehicle sector is currently characterized (and this is true not only of the Netherlands) by rapid product innovation and a rapid increase in product variation. Product development is aimed at producing cars which are increasingly safer, more economical, which last longer, are more comfortable, and more environmentally friendly. New models are of a higher quality than their predecessors. They last longer, require less repair and maintenance work, are more economical and cleaner, are more comfortable to use, and often have all sorts of new accessories and technical devices to increase driving pleasure. These innovations are particularly apparent in four fields:

- in the field of engineering/construction technology; for example, in the development of safer bodywork, new types of engine, new types of fuel systems (LPG), and new hydraulic and pneumatic applications (particularly in commercial vehicles);
- in the field of materials technology, for example, in the use of synthetic components, ceramic materials, new car paints and coatings;
- in the field of (traditional) car electronics, for example, built-in car radios, cassette players, telecommunication equipment, electrically operated windows, mirrors, locks, etc.;
- in the introduction of micro-electronics and the "car information systems" based on this.

This last development, the great increase in the number of applications of micro-electronic control systems in cars, has had by far the greatest influence on jobs and qualification requirements in motor vehicle repair businesses. The above-mentioned VAM publication (VAM, 1988) identifies three main applications of micro-electronics: motor management systems, vehicle control systems, and vehicle pilot and monitoring systems. We will examine these new techniques in greater detail.

The first applications of car electronics concern the engine. The engine management systems, i.e. systems regulating and/or controlling essential engine functions, can be divided into three main groups: intelligent ignition systems, electronically regulated fuel systems, and the electronically operated accelerator pedal. The control of ignition and fuel injection are increasingly integrated in a single electronic unit. The latest versions of these systems, e.g., the "monojetronic" by Bosch, have an adaptive or self-regulating character. They are able to constantly adapt the data which control ignition and the mixture of fuel while driving, to the behaviour of the engine under changing circumstances; for example, when there are changes in fuel quality or in the driver's behaviour. Important advantages of this technology are the constant optimalization of engine performance, and therefore the engine's decreased vulnerability to faults (VAM, 1988). These sorts of electronic systems, initially used particularly in more expensive cars, are currently also starting to penetrate the cheaper middle-of-the-range models. It is expected that Dutch environmental policy, which has imposed stringent norms with regard to exhaust emissions (compulsory catalytic convertor) will strongly encourage the introduction of electronic control systems in cars. Electronically controlled engines not only give better performance, they also use less fuel and considerably reduce the emission of noxious substances.

The incorporation of the electronically operated accelerator pedal in a car also allows for the application of new vehicle control systems, such as anti-blocking brake systems (ABS), and anti-skid regulation (ASR). An ASR system ensures that the engine capacity is accurately transmitted to the drive wheels, taking into account the nature and condition of the road surface. This considerably increases driving safety and comfort in difficult road conditions, e.g., a wet or snow-covered road surface. With a link to a car radar system, the electronically operated accelerator pedal can fulfil a similar function in conditions of fog or of poor visibility. The next few years will also see the introduction of other vehicle control systems, such as electronically controlled clutches and gearboxes, and electronically controlled suspension. Some commercial vehicles already have this (VAM, 1988). ABS and ASR systems are currently still found mainly in the more expensive models.

A third important application of micro-electronics – though this is still largely a thing of the future – concerns vehicle pilot and monitoring systems, including dashboard information and navigation systems. Because of the rapid development of sensor technology, it is possible to continuously measure an increasing number of functions while driving, such as oil pressure, the temperature of the water in the cooling system, the water level in the battery, and tyre pressure, and display them on the dashboard. In this way, routine check-ups are replaced by permanent systematic monitoring (VAM, 1988). In future, cars will be equipped with on-board computers and navigation systems which help the driver to determine his location, plan a route, avoid detours, etc. Linked to new traffic monitoring systems outside the car (radio data systems, systems for the notification of traffic jams etc.), these can considerably increase driving comfort. However, in the Netherlands, these vehicle and traffic monitoring systems are still at the developmental and experimental stage; they have hardly been introduced in practice.

4.2 New developments in repair shop technology

The great increase in the use of micro-electronics in the repair shop, particularly for tasks which are at the heart of the job – tracing and remedying faults – is very important for the work of car mechanics. Significant progress has been made, particularly in measurement and testing equipment, and currently all sorts of new testers are appearing on the market at a great rate, which are much more sophisticated than the traditional measurement instruments. Engine testers in particular have undergone great innovations. Until recently the engine tester was primarily a measurement instrument. With the introduction of diskette stations, hard disks and CD-ROM, the tester has developed to become a diagnostic station and database (AM Special, 1992). The most modern machines (Bosch, SUN, Crypton) are equipped with a personal computer which monitors the engine tester. They can be used as an independent working station, but can also be fitted with a modem which allows for communication with other computer systems and networks. In addition to regulating the engine, they can also often be used for testing other electronic systems. Thanks to the introduction of this new computer-monitored testing equipment, tracing faults, one of the most time-consuming tasks in the repair shop, has been considerably simplified and partly computerized. The new testers have a large memory capacity in which the factory and tuning data of different makes of cars can be stored. The diskette stations allow the new data to be entered more quickly and simply; updates from car manufacturers can immediately be processed by means of diskettes. The new testers often measure not only the recorded values, but also compare the measurement data with the factory norm data and indicate whether or not the measurement value falls within the tolerance limits (approval/error signal). Some testers go even further, and in the case of faults, also provide an explanation of the possible causes of the measured defects; the mechanics can then trace the causes of the defect monitored on the menu. The more expensive engine testers print out a diagnostic report after the testing programme, giving a survey of all the deviations that were found. In some cases a customer report can be drawn up as well as a repair shop report, explaining the results of the test in terms which the customer can understand. The control systems in the car and the diagnostic systems in the repair shop, and above all the possibility of linking the two, have led to great changes in the nature of diagnostic work and have greatly reduced the amount of time involved in this. The new technical systems also allow for all sorts of new ways to organize work. For example, the motor testers can be linked to importers' and manufacturers' databases so that the data can be updated from a distance. This also opens up the possibility of making a diagnosis from a distance, e.g. by specialists at the manufacturers (AM Special, 1992).

Currently, diagnostic stations are being marketed in the Netherlands at a great rate, both stations for particular makes and general stations. For the general stations, separate software is supplied for every make, because the engine electronics differ. At the moment, the hardware and software are still fairly expensive, which is a problem particularly for general motor vehicle businesses. They repair every make of car and therefore have to invest much more in testing software. At present this is not too serious, because they often repair the slightly older cars which do not have so many electronic components. However, in a few years time this will certainly be a problem. Another problem that has arisen in smaller businesses is that the technology – in this case, the new testers – is often relied upon as a "solution to every problem". This can result in the in-service training of mechanics being neglected.

In fact, it is not only in the private car sector that computerization is increasing. Computerization is also on the increase in repair shops for testing and detecting faults in heavy goods vehicles, using engine testers, but also other new testing equipment. For example, a brake testing console can be expanded nowadays to become a fully automatic brake diagnostic centre. The centre can be built up in modules. For example, a standard brake console can be expanded with weighing units with which all the axles can be weighed separately, with a provision for measuring in two driving directions, and with a weight simulator to test the performance of the brakes under varying axle pressures. Because of this modular structure, the garage owner himself can determine which functions/system components he wishes to have, and rapid modifications or expansions of

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parts are possible if required. This sort of equipment also requires large investment, and for the time being is of interest only to larger and/or specialist businesses.

4.3 Logistics and administrative computerization

A third field in which micro-electronics is making a mark is that of logistic and administrative computerization. This development is particularly affecting stores, sales and management functions in motor vehicle businesses. Initially, computerization was concentrated mainly in larger businesses. In recent years, increasing numbers of medium- and small-sized businesses have also become computerized, particularly their administration. BOVAG estimates indicate that in 1990 almost two-thirds of dealer businesses were computerized, while the level of computerization in general garage businesses was about 15 per cent. The majority of computerized dealers use their own computer, usually a PC or mini computer. All VAG dealers are linked to the importer's central computer; a number of others make use of computer service companies. Most importers aim to achieve uniform decentralized dealer computerization, in which every dealer has his own computer which can be linked to the importer's or manufacturer's central computer. However, in practice there are quite a lot of differences in the extent to which and the way in which the various dealer organizations are computerized. Some importers, particularly the factories (e.g. Mercedes, Peugeot, Renault, Fiat), have a closely integrated network which, in turn, is linked into the manufacturer's network at the European level. Other factory-based importers (e.g. Saab, Skoda, Lada) still hardly work with computerized networks at all. Independent importers who often import several makes are also less often bound by central manufacturers' regulations. Many dealers can make their own choice from the hardware and software packages available on the market; currently there are more than 100 of these. All in all, the communication between repair shops and importers still appears to be lacking in structure. However, it is clear that small makes and general businesses are increasingly falling behind the larger dealer organizations as regards their facilities. In order to remedy this, the sector organizations are endeavouring to establish a national sector network, so that applications can be organized centrally.

Computerization of importers is aimed particularly at the data flow on car sales, the financial administration, parts, and guarantee arrangements. However, computerization is also increasingly being introduced in the businesses themselves. Computers are being used for improving contacts with customers and increasing car sales. Information about customers is systematically stored in databases which can be used for service purposes. For example, in this way it is possible to check approximately when customers are due for a service or for a new car. At this point they can be approached directly by the business concerned. In the repair shop, the computer can be used for the administration of the repair shop and stores. Information about work carried out, the number of hours worked, used parts etc., can be stored in the computer and used more easily for making management decisions. All these applications of computerization allow for more efficient business management and impose new demands on the management of the repair shop and of the business.

4.4 Developments in the markets

It is not only technological development which influences the nature of the work in motor vehicle businesses; developments in the market and the workforce available will also influence the jobs of employees in repair shops and sales departments in the coming few years. As regards the commercial aspect, a number of developments play a part (see also, VAM, 1988; RABO, 1989; AMRO/ABN, 1990).

The quality of cars on the road is increasing. Gradually increasing numbers of new cars are appearing on the Dutch roads, which require fewer visits to the garage and less maintenance. They wear out less quickly and do not need the attention older models need. The trend is towards reduced maintenance and repair work. In addition, maintenance is taking up less and less time because of the use of advanced equipment and because maintenance increasingly consists of the replacement of parts and is less reliant on labour intensive repairs. According to information from BOVAG, the maintenance requirements of the average car fell by 30 per cent between 1981 and 1986 (RABO, 1989). In the long term, this decline in maintenance work will no longer be fully compensated for by the growth in the number of cars, the relatively greater age of the cars on the roads and the increase in the repair work on damaged vehicles.

A second factor is the gradual saturation of the car market and the accompanying increase in competition between motor vehicle businesses. The number of Dutch cars on the roads is still growing and will continue to grow for the time being, but this growth will level off. Competition is not only aimed at quality and technological devices, but also takes place at the level of prices and exchange values. Car makes and motor vehicle businesses will have to make additional marketing and sales efforts if they wish to retain their market share. Businesses will have to adopt a more active approach towards markets and client groups, and will have to take greater care of their clients. Because of the current high prices for exchanges, the trade in second-hand cars will also continue to remain under pressure for the time being.

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Furthermore, demographic developments have led to changes in the consumer population and to shifts in the demand for cars in the private sector. In the Netherlands, the family is viewed less and less as the sole cornerstone of society, and the number of one and two-person households is rapidly increasing. From being a "family possession", the car has increasingly become a personal possession. In more and more households there is a need for more than one car. Because of the increasingly ageing population, the percentage of older drivers is also growing constantly. These two developments will probably lead to an increasing demand for economical, compact, safe and reliable cars, at the expense of medium range and more expensive models. Within this category there will be another distinction between younger and older car owners; two groups with very different demands as regards cars (fast/sporty versus safe/reliable). Car dealers will have to be much more sensitive to these differences in client demands.

In general, consumers – and this is the fourth factor – will become increasingly critical when purchasing a car and having maintenance, repairs and services carried out. When they purchase a car or have repairs done, customers will want more information about the pros and cons of the different options and will express their views more emphatically to dealers and mechanics. When they buy a car, customers will be increasingly influenced by specific personal needs and this will lead to a greater differentiation in demand. The reaction to these different customer requirements is the emergence of all sorts of product variations and accessories, but it is to be expected that in the near future the motor vehicle industry will adopt the concept of a "modular car". This concept means that the client chooses from a limited number of more or less "bare" basic bodyworks, and from a range of modules from which he can put together a complete car together with the car dealer. For example, he can make a choice of different sorts of engines, dashboards, seats, wheels etc., (VAM 1988). Given the state of car production technology (flexible computerization!), this process is possible in principle. However, the introduction of this concept will have major consequences, not only for sales, but also for the logistics of ordering and delivering new cars. We have not reached this point yet, but the present variety of makes, models, parts and accessories already means that car sales is far more demanding than it used to be.

4.5 Job changes and new qualifications in the repair shop

What do all these developments mean for the work and the organization of work in motor vehicle businesses? Let us begin with a close examination of the changes in jobs in the repair shop.

Obviously developments in the technological field are the most important factors with regard to jobs in this area. The VAM has characterized the present development in mechanics' tasks with the expression "from practical mechanic to diagnostician". The VAM is afraid that this development will lead to a division between mechanics. For diagnostic work, the larger motor vehicle businesses will increasingly tend to attract specialist electronics technicians with further and better training. This would leave the relatively simple jobs such as services, small repairs or the replacement of electronic components for the present mechanics, who usually have a lower level of training. The VAM advocates major in-service training for this last group of mechanics, as their opportunities for advancement or for the future will otherwise be considerably limited (VAM, 1988).

The KWW study also anticipates far-reaching consequences as a result of the large-scale introduction of micro-electronics in the repair shop: vehicles are more complex, the faults and breakdowns are more complicated, and the equipment for detecting faults is becoming more sophisticated. According to the study, these developments will have consequences for the business managers, the repair shop managers and the chief mechanics in particular. Employees at these levels will have to come to terms with the new electronic systems. In future, their most important tasks will consist of detecting and remedying faults and maintaining components equipped with electronic control systems. This will apply to larger businesses more than to smaller ones. A knowledge of electronics and the ability to use the measurement and monitoring equipment will be extremely important requirements for these employees. However, they do not have to be electronics specialists, but require specific knowledge of how the systems function. For this purpose they must understand block diagrams, wiring, signal measurement and interpretation (with the help of documentation). What actually happens inside the electronic "black box" is unimportant. However, they must understand the significance of the signals into and out of the black boxes. This requires a considerable capacity for abstract thinking (KWW, 1989). An important conclusion of the KWW study is that electronics is no longer a separate specialist area but is/must be an integral part of the job of the chief mechanic.

The KWW study does not paint a very optimistic picture for (ordinary) mechanics either. At the moment their main tasks include assembly, stripping down and routine maintenance work. They do little diagnostic work because of the increasing technological complexity. The study reported two different views on the division of tasks between the chief mechanic and the other mechanics in the businesses they studied. One view is that "the

chief mechanic is an all-rounder who can carry out the (limited) practical mechanical work on the side. Only routine work such as simple maintenance tasks, the fitting of accessories etc., is left for other mechanics". The other view is that the chief mechanic specializes in diagnostic work, leaving assembly and stripping down to his colleagues, who have a lower level of training and less experience (KWW 1988). According to the study, the first point of view is more realistic; certainly the two views indicate the existence of a degree of flexibility in the organization of the mechanics' work. The demands placed upon mechanics in future will primarily involve more traditional qualifications such as a knowledge of the basic principles of motor vehicle technology and electronics, and practical mechanical skills. Mechanics who are able to progress towards a job as a chief mechanic will then have to acquire an understanding of electronics at a later stage of their career (KWW, 1988).

4.6 Job changes and new qualifications in stores and sales

The changes in the job profiles in stores and sales are to a large extent determined by changes in the market. However, developments in car technology and logistics are also important for the employees in sales and stores.

Specific jobs in stores are found mainly in larger motor vehicle businesses. Smaller businesses usually do not have a separate employee for the stores, and in practice there will be little change in this for the time being. In large businesses we anticipate an increase in the work in stores. There will be an increase in the sale of parts and accessories, and the employees in the stores will provide more and better services for the staff in the repair shop. As a result of the introduction of computer technology, administrative work will be reduced. Commercial tasks in buying and selling will increase. The store manager in particular will have to have an adequate insight into car technology, and into the commercial car sector, even down to the mechanic, in addition to having qualifications in commerce and administration (KWW, 1988). In addition, a knowledge of business management is, and will continue to be important for these jobs.

Even greater changes will take place in future jobs in sales than in stores. The VAM terms the development of the sales job profile "from salesman to advisor" and in this context has even coined the term "motor vehicle consultant" (VAM, 1988). At present, this seems rather exaggerated, but there is no doubt that in future the demands on salesmen in motor vehicle businesses will be much greater than they have been up to now on account of increased competition, differentiation in the market, increasing technological complexity, and the growing demands of clients. In the first place, they will have to have an up-to-date knowledge of motor vehicle technology. According to VAM, sales is increasingly a matter of "translating technology": "the task of a good salesman is to translate the specific technological aspects of a car into commercial, functional and economic arguments on the basis of which a hesitant consumer will ultimately decide to purchase the new car he wants from him" (VAM, 1988). In addition to sound commercial qualities, salesmen will also have to have a good technical background and an adequate knowledge of new motor vehicle technology. Furthermore, salesmen, and certainly sales managers, will have to have a knowledge of modern marketing techniques and instruments, not only in order to attract new customers, but also to keep existing customers. In addition, future salesmen will have to have good selling or "consultancy skills". They will have to be able to clarify, discuss, evaluate and translate the client's wishes into technically and financially feasible options. When the concept of the "modular car" becomes a reality, selling a car will certainly become less and less of a standard task, and will become increasingly a "made-to-measure" job. The ability to respond well to the varying demands of critical clients then becomes crucial.

For the time being, the KWW study has found less far-reaching changes in jobs in sales. There is an increasing degree of professionalization in this job, which is expressed for example, in an increasing use of marketing techniques and computerized aids. This results in demands for higher qualifications in smaller businesses. In larger businesses this is not the case to the same extent. The most important qualification requirement for salesmen is and will continue to be a good sales technique. In the businesses which were studied, a technical knowledge of the product clearly takes second place, and will continue to do so in the future, while demands are greater in the commercial car sector than in the private car sector. In addition, it is evident that experience is quite highly valued (KWW, 1988).

4.7 New specialist areas and "informal jobs"

The developments outlined above have been taking place for some time, and it seems that they will continue at an even faster rate in the next few years. A number of the large manufacturers, particularly those which have a technological lead, have responded to these developments with changes in their training programme for mechanics in dealer businesses. As a result, new specialist jobs have been introduced in various dealer organizations, some of which are above the level of traditional repair shop jobs.

For example, the Mercedes importer has three training groups/levels: service/maintenance, repair, and diagnosis; mechanics are trained at three levels. There is a separate package of

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courses for each group/level, culminating in a test and a diploma.

- The VW/Audi importer also organizes its own training courses, consisting of modules, which train employees for specific jobs in the dealer organization. A distinction is made between three jobs:

- VW/Audi maintenance technician (level of entry: assistant mechanic/LBO (basic vocational training))

- VW/Audi repair technician (level of entry: mechanic);

- VW/Audi technical specialist (level of entry: chief mechanic).

The preliminary training requirements are geared to the content and level of the sector training.

Other makes, such as Ford and Renault, also have these sorts of training courses. At the instigation of the manufacturer, a number of importers of specific makes have recently expanded their training courses with training at a level higher than that of chief mechanic.

- For example, Citroën has a course for CO-TECH mechanics. This course lasts 9 weeks, comprises most of the other technical in-service training courses (usually electronic applications), and is aimed at experienced mechanics who can subsequently work in their business as technical specialists as well as instructors.

- Peugeot has had its own three-level technical in-service training path for some time. This extends up to the level of chief mechanic. In addition, it has recently added a new training course which trains employees as "Peugeot Technical Specialists". This training is aimed at experienced mechanics, comprises seven separate courses, with the main emphasis on applied electronics, and culminates in a certificate.

Probably the Japanese makes, particularly Toyota and Nissan, go furthest in adapting the job structure in dealer businesses.

- The Toyota organization has a training programme in which employees are trained at 4 levels:
  Stage 1: Maintenance mechanic;
  Stage 2: Technician (emphasis on mechanical work);
  Stage 3: Master Technician (emphasis on electronics);
  Stage 4: High-Tech Master Technician (emphasis on diagnosis).
  Mechanics can follow this whole programme over a period of five years. Subsequently, they undergo regular in-service training to keep their knowledge up to date.

- Nissan recently introduced a new job structure for its technical repair shop personnel in which the term "mechanic" was replaced by "technician". A distinction is made between four levels of technical jobs:

  Repair shop assistant
  Technician
  Technical specialist
  High-tech engineer

  The last two jobs are at a higher level than that of chief mechanic.

Thus, in the Netherlands, all sorts of "informal job" (Rauner & Zeymer, 1991) have developed next to, and partly above the traditional job structure. The fears expressed by traditional training bodies about excessive specialization in the field of mechanics are not entirely unfounded. Furthermore, these initiatives on the part of the manufacturers/importers have several different purposes. In the first place, it is in the interests of manufacturers/importers for the repair shop personnel in their dealer businesses to be trained as well as possible in the latest techniques, so that they can provide the best possible service to customers. With increased competition, the quality of the service in the repair shop is becoming an increasingly important sales instrument. Secondly, the new jobs are intended to motivate personnel, as mechanics have more potential for advancement in the new structure than they had in the old.

Thirdly, it is hoped that in this way the image of the mechanic's job will be enhanced, so that the motor vehicle sector becomes more attractive to people entering the labour market for the first time.

4.8 Developments on the labour market and in recruitment policy

Improving the job image on the labour market is by no means superfluous in this sector. For some time, the motor vehicle sector has had serious problems with recruiting manpower. The number of school leavers joining the labour market every year has fallen drastically in the last few years (by approximately 25% between 1980 and 1990), and in addition, lower technical education (LTO), the most important branch of education supplying the motor vehicle sector, appears to attract a decreasing number of young people. Within this educational field itself, a decreasing number of students are opting for the course in motor vehicle technology (KWW, 1988). Only through intensive recruitment campaigns has the motor vehicle sector been able to keep the numbers entering from LTO education at a constant level up to now. In recent years, an average of approximately 3,000 young people entered the sector from LTO.

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There is general agreement in the motor vehicle sector that the level of the present LTO is actually too low, given the higher requirements placed on repair shops. However, businesses are apparently finding it very difficult to attract people with higher levels of education. This is partly related to the sector's image. The motor vehicle business has a relatively low status in comparison with related sectors, has relatively low salary levels as a result of low profit margins, and in general offers mechanics little prospect of promotion. This discourages newcomers, and means that experienced, well-trained people, who are equally attractive to other sectors, are soon inclined to move to other employers. Nevertheless, it is expected that the larger dealer businesses in particular will make greater efforts to attract new employees at a higher level, and that in time there will be larger numbers of technicians with further and higher education than is the case at present. In 1991, 800 school-leavers entered the sector from (short) vocational training courses. Half of these had technical training; the other half, economics/administrative training. In the same year, 3,700 apprentices entered the sector from the apprenticeship system; 3,000 from basic, and 700 from advanced training courses; 80 per cent of these were technicians.

The KWW also indicates a discrepancy between the supply and demand for young people. In the early 1990s, there was a particular shortage of employees with LTO education entering the motor vehicle business at the bottom end in apprentice mechanic jobs. The sector has responded to this development successfully with an intensive recruitment campaign aimed at this target group. The downward trend has been reversed, and the number of LTO students opting for motor vehicle technology has started to increase once again.

The sector considers that shifting the recruitment efforts to target groups other than school-leavers from LTO, is another solution to personnel problems at lower levels. For example, businesses could start to recruit more school-leavers from further education in general, or school-leavers who have left (short) further technical courses prematurely. These groups have a higher starting level, and probably also have more to offer than LTO school-leavers. In view of the higher qualification requirements of businesses, this is all to the good. At present, this option is being given serious consideration. A third possibility is more recruitment from the so-called disadvantaged groups, i.e. job-seekers regarded as having poor chances on the labour market. The motor vehicle sector is fairly active in this field as well. For some years, special projects have been set up for particular target groups, such as the long-term unemployed, immigrants, the handicapped and women going back to work. The projects are co-ordinated by the INNOVAM. Participants are given basic training, and practical training course with work experience in a business. They can follow a course of training in a specialist area, and are then given permanent employment. This is a path with the guarantee of a job. The initiative has been fairly successful. In 1992, 34 projects were carried out, with approximately 300 participants. For 1993, 48 projects are planned with 450 participants.

The projects are mostly carried out in co-operation with training bodies in the public employment organization. The sector is also trying to attract new employees through such projects.

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5. EDUCATION AND TRAINING

It is not only through recruitment at a higher level, but also through stepping up the in-service training of personnel, that attempts are made to respond to the latest developments in the technical and commercial fields. The sector organizations are very aware of the importance of training and in-service training, and recognize the need to catch up in this field, particularly as far as the present generation of mechanics is concerned. In recent years, all sorts of activities have been undertaken to stimulate in-service training. This section describes these activities.

5.1 The training system

The present training system in the motor vehicle sector has three main divisions: the (initial) daytime education, the dual specialist training, and the short training courses. Each division has a number of specific training institutions. The initial daytime education takes place in the public sector; it is financed by the state from the national budget. The dual specialist training is organized by the training institutions of the apprenticeship system. These are financed partly by the state and partly by industry. The short training courses are virtually entirely organized by private bodies. They are financed entirely by companies, or by the participants of the courses themselves. Moreover, in recent years the dividing line between the public and the private sector has blurred. Centres for regular vocational training have been given the opportunity to start developing commercial activities, e.g. for businesses, on a contractual basis. Private training institutions aim to be included in the apprenticeship system, and schools for regular daytime education would like to cooperate more closely in certain fields.

5.2 Regular vocational education

Within daytime education, the most important types of education are: lower technical training (LTO), short further technical training (KMBO), further technical training (one specialist motor vehicle technical school, and a number of MTO schools with a special class for motor vehicle technology within the technical engineering course), and the Institute for Car Dealers (IVA), specific specialist training for the job of car salesmen. The LTO is the most important supplier in the sector. With an LTO diploma, a student can find employment as an apprentice mechanic. With a KMBO or MBO diploma, it is possible to start or be promoted to the job of mechanic, chief mechanic or aspire to the management level. As already stated, problems are expected with the entry of employees at this level as a result of shortages on the labour market. The number of school leavers with LTO motor vehicle technology fell by approximately 40 per cent between 1987 and 1991. Although the number of new students is currently increasing again, it is still expected that the supply of labour will not suffice in the coming years to meet the demand for apprentice mechanics. The recruitment campaigns in this target group will be intensified. In the last two years approximately 3,000 new students have started this training each year.

5.3 The dual specialist training courses of the apprenticeship system

Following daytime education, virtually everyone in the repair shop completes an additional dual specialist training course in the apprenticeship system. For this purpose, apprentices conclude an apprenticeship agreement with a business where they work 4 days a week; on the fifth day, they go to a regional school for supervised vocational training (BBO), where the theory is taught. The apprenticeship system for motor vehicle technology has vocational training courses at three levels. The primary level (2 years), trains the apprentice for the job of mechanic. The advanced level, another 2 years, trains him for the job of chief mechanic. For a job at management level (e.g., repair shop manager), additional training is required at the tertiary level (1 year). The dual training courses are organized by a central institution, the National Association for the Motor Vehicle Sector. This was recently integrated in the newly-founded innovation and training centre for the sector (the INNOVAM), directed by the managers and union members in the sector's Training and Development Fund (OOMT).

The number of participants in the apprenticeship system greatly increased during the second half of the 1980s, viz., from 6,780 in 1984 to 12,855 in 1991. About half of these apprentices follow primary or advanced training as mechanics for private cars. Another large group (approximately 20%) participates in the primary and advanced training for commercial car mechanic. In 1991 these apprentices were working in a total of 7,025 apprenticeship businesses. About 35 per cent of the apprentices did the training in the context of a so-called GOA system, a joint training activity in which the practical component of the training is organized between businesses and practical centres, through which the apprentice progresses. In 1991, there were 1,800 of these GOA systems, virtually all combinations of several apprenticeship businesses and "protected" training places.

Within the motor vehicle businesses, the apprentices are supervised by an instructor for the practical component of their training. The sector employs about 300 of these instructors on a full-time basis (KWW, 1988). However, the number of instructors is not much greater, because this job is often carried out by the repair shop manager or chief mechanic in (small) businesses which do not have a separate instructor.

5.4 Private short training courses

Short training courses are available for the various jobs. In comparison with other sectors, there is

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only a limited number of bodies on the market providing these.

- The sector training centre, the INNOVAM, not only organizes dual specialist training, but also training for entrepreneurs (Business Establishment Act) and management training. In addition, it provides in-service training and refresher courses (daytime, evening and correspondence courses) for mechanics, including basic courses in applied motor vehicle electronics. General motor vehicle businesses make use of this provision. This will be discussed in more detail in the following section.

- Courses organized by importers are very important. These are often training courses for specific makes, organized by importers for the mechanics employed by their dealers. There are approximately 20 importers' training centres in the Netherlands. In terms of the number of course days, they provide about 80% of the in-service training requirement. This is discussed in more detail in section 5.6.

- All suppliers of new testing equipment provide training programmes for mechanics who have to use the new equipment. The training usually consists of a combination of on-the-job training and a short course with the supplier. In addition, extensive programmes are supplied with the equipment to help with its use. There is no information available about the number of training courses or the number of participants in this type of training.

- There are some private training institutes which provide (basic) training in motor vehicle technology in the form of (correspondence) courses. However, the number of people following their courses is very low, and only amounts to several dozen per year.

- In cooperation with the government, i.e. the regional employment offices, special projects are organized for particular target groups, such as women, the long-term unemployed, and ethnic minorities. Government subsidies are used for these projects, as well as special state-run training centres. Most projects are carried out in collaboration with the INNOVAM. Altogether this involves several hundred people per year.

- Relatively new on the market are the schools for vocational training and dual specialist training courses. On the basis of new legislation for education (see section 2), these were recently given the possibility of providing parts of their whole course as a separate paid activity, and of developing paid made-to-measure courses for industry. These forms of "contractual education" are currently still largely in their infancy, but are expected to increase in the coming years.

Short training activities mainly concern courses for technical jobs. There is little in-service training for sales jobs, but this is increasing, particularly with importers. There are not yet many in-service training courses for management jobs in the sector, apart from the very specific management training courses aimed at particular makes, which importers organize for dealers of affiliated businesses.

The in-service activities in the sector are virtually entirely concentrated on two categories providing courses: INNOVAM and the importers. We will discuss the courses provided by these two parties in more detail below.

5.5 In-service training provided by INNOVAM

The INNOVAM, formerly the VAM, has traditionally organized an extensive range of in-service training courses for the sector, used particularly by smaller general motor vehicle businesses. These smaller businesses, which are not linked to a particular make, do not have access to the training facilities of the dealer networks; they are virtually entirely dependent on the INNOVAM, as there is hardly anyone else on the market providing courses. The INNOVAM's courses can be roughly divided into a number of main groups:

- training courses for entrepreneurs; these are primarily the courses which someone who wishes to start his own business in the sector can follow to comply with the requirements of the Business Establishment Act which makes provision for professional and commercial skills;

- management and business management; these comprise several courses to support an entrepreneur and/or manager with regard to management, e.g. balance analysis, budgeting, store management.

- inspection training courses; the courses required to obtain a certificate to carry out general periodic safety checks in the business.

- technical in-service training courses; these include four basic courses in applied electronics and a number of courses geared to specific areas: fuel systems, engine management, brakes/steering/suspension, and environmental aspects; it also includes a number of special courses in damage repair;

- commercial training, such as courses in sales technique, communication, client-oriented behaviour and quality consciousness;

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- in-company made-to-measure training courses; these are made-to-measure courses developed in consultation with, and adapted to the specific needs of a particular business.

Most training courses are short, lasting one day or several days. They are provided as a standard course, and employers and/or employees can subscribe to them freely. In principle they are paid for by the employer, who is then sometimes (partly) reimbursed from a subsidy in the training fund. A number of courses can also be followed as correspondence courses or as evening courses. Virtually all the courses award certificates.

A recent innovation, with which the INNOVAM has tried to respond to the latest technical developments in the sector, is the Basic Course in Applied Electronics. This course, which is aimed at mechanics who have not yet finished their training, consists of three modules of progressively difficult levels, in which the mechanics are introduced to the principles of electronics and electronic engine control. The course lasts 3 days, plus 20 half-days. When the mechanic has completed the whole course, he receives a certificate. In addition to this basic course, courses have also recently been developed for specific electronics applications, e.g. for injection systems (K/KE-jetronic, L/LE-jetronic, Mono-jetronic) and for ABS and ASR systems for both private and commercial vehicles. With these new courses the INNOVAM is also responding to criticism regularly expressed in the sector in the past, that the training programmes lag behind the latest technical developments, and are not sufficiently geared to current practices in the repair shop.

According to the KWW study (KWW, 1988) the (INNO)VAM catered for approximately 20 per cent of the in-service training requirements in the sector in 1988. The precise figures on the numbers of participants in INNOVAM courses are not available. However, incomplete data does show that the Basic Course in Applied Electronics is particularly popular. In 1990, more than 2,000 participants registered for this course. In addition, there was a great demand in 1990 for management training courses and after-sales courses. The inspector's course attracted the largest group of participants. In fact, this course is not described as an in-service training course by the INNOVAM itself.
Altogether the INNOVAM employed 255 employees in 1990. How many of these actually provide training is not known.

5.6 In-service training provided by importers

The majority of in-service training efforts in the Dutch motor vehicle sector is organized by the importers, and consists of training courses provided by importers for mechanics employed by their dealers. The courses are given centrally, are often geared to a specific make, and are aimed at training the dealers' personnel in all sorts of new techniques used in the make concerned. In terms of the number of course days, importers catered for approximately 80 per cent of the in-service training requirement in 1988 (KWW, 1988).

The in-service training provision of importers can be roughly divided into the following main categories:

- basic technical courses; these are the above-mentioned courses which mechanics must follow to become familiar with the specific technical aspects of the make concerned (see section 4.6.); for most makes, these courses are available at three levels; usually each level is one step higher than the corresponding level in the vocational training of the apprenticeship system; a vocational training diploma is usually needed for entry to the course; at the end of the course, participants receive a certificate;

- specialist technical courses; training courses which are above the level of the advanced training in the apprenticeship system, aimed at experienced mechanics who can or wish to develop towards a job such as technical specialist, or even further as a high-tech specialist in their business; in these courses, aspects such as the detection of faults and diagnosis using modern electronic systems are of central importance;

- courses on new products and models; short specialized courses, usually organized prior to the introduction of new types or models, which provide in-service training for mechanics for the technology applied in the new models; the provision of this sort of course is in line with the manufacturer's product policy;

- commercial courses, including many courses in sales and communication techniques, for salesmen of affiliated dealers; these are also courses for promoting customer bonding with particular makes and businesses;

- management courses; these are courses reinforcing customer bonding with the make and organization and include general management training courses, and courses dealing with specific aspects of management within the dealer network.

The technical courses are by far the most important in this range. It is through these courses that the importers, at the instigation of the manufacturers, endeavour to maintain and increase the standard of qualifications of personnel in the dealer businesses, and therefore the service to the "users".

In the Netherlands, there are about 20 importer training centres. The factories and some large independent importers, have their own centres. In general, the training centres are well equipped. They have access to the latest technology and equipment, as well as modern teaching aids, such as interactive video, simulators, opened out models, etc., which are often supplied directly by the manufacturer; they adapt the teaching materials themselves to the Dutch situation. The larger training centres employ 6–8 full-time trainers; the smaller ones employ 3 or 4. Usually there are specialized trainers for technical, commercial and management courses. Not all importers carry out all the courses themselves. Some contract out certain courses to private training organizations. Others collaborate with the INNOVAM for certain courses, particularly the basic courses. Recently the Ford importer has even transferred his whole training programme, including the whole staff of trainers, to the INNOVAM. Several importers have also set up cooperative projects with schools for regular daytime education (LTO, MTO). In this context, for example, they organize excursions to the training centre or to dealer businesses, and provide the schools with modern, up-to-date teaching materials.

The importers' courses are only open to employers and employees of the affiliated dealer businesses. Training arrangements are set out every year in the contract between the dealer and the importer: the dealer contract. The arrangements made, the way in which the training is organized, and the degree of obligation differs from importer to importer. Some importers impose fairly stringent obligations on their dealers. They draw up a sort of "training schedule" for their dealer network, and indicate themselves which mechanics must follow which courses; the dealers are bound by this programme. For other importers, the arrangements have a less compulsory character. They draw up a programme every year and inform the dealers of this, but then leave the dealers free to determine for themselves which employees go to which courses, and when; however, the importers ensure fair selection procedures. A number of importers make a distinction between compulsory and optional courses in the range of courses they provide. The costs of the compulsory courses are usually borne jointly by the importers and the dealers. The costs of the optional courses are usually wholly charged to the dealers or the participants. Unlike the INNOVAM courses, the importers' courses are not subsidized by the sector's training fund. According to the managers and union members who form the board of directors of the fund, money from the fund, which is generated as a result of the conditions of employment, can only be used for training courses carried out under the umbrella of the sector's training institute.

No summaries are available of figures on the participation in importers' courses.

According to information from a number of the larger importers, the numbers of participants in these courses every year are (very) large. By way of illustration, a few figures on the number of course days (technical plus commercial) in 1991 are given below:

• Alfa Romeo	700
• Citroen	6,000–7,000
• Fiat	900
• Mazda	1,000
• Mercedes	6,000
• Mitsubishi	250
• Peugeot/Talbot	3,500
• Toyota	6,800
• VW/Audi	2,000–2,500
• Renault	2,000–2,500

Source: importers

It should be noted that these figures are very approximate, undocumented estimates. Nevertheless, it is clear that the in-service training programme of importers significantly exceeds that of the INNOVAM.

5.7 Participation in training and obstacles to training

To summarize, it may be said that the motor vehicle sector has a well-developed training infrastructure. There is a training fund, there are training regulations, there is a large range of courses, and there are good organizations which can provide the courses. Nevertheless, it is often pointed out in the sector that the training undertaken in businesses is not as good as it should be. Why is this? What prevents adequate use being made of the provisions available?

Before answering this question, let us take another look at participation in in-service training. There is no satisfactory recent survey of this, though there are studies giving some indication.

A study of the in-service training provision in the sector in 1989 for 65 businesses (KWW, 1989) shows to what extent motor vehicle businesses actually make use of the training rights which they have on the basis of the day release training arrangement (1 day per employee per year). Table 5.1 shows how many business allocated more days to training in 1989, how many kept exactly to the norm, and how many fell below the norm. This shows that the motor vehicle sector as a

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whole complies reasonably with the norm, but large dealer businesses clearly do more for training than small businesses.

The 1988 KWW study includes a survey of the number of days that the subjects of this study stated different employees spent on courses on average in the years after 1988, for every type of job (see table 5.2). The figures are based on a survey of 115 motor vehicle businesses, of which 73 were dealers, involving a total of 1,100 personnel. According to these data, the number of days of in-service training per employee per year amounted to an average of 2.6 in the years after 1988. In small businesses the average was approximately 2, in large businesses, almost 3 days. Two-thirds of the businesses which were questioned say that this number is more or less equal to the number of days involved in 1987. In one-third of the businesses, the figure was higher. The figures reveal a striking need for training for repair shop managers and instructors.

Last year the ITS carried out a study of the training of employees in 362 small and medium-sized businesses; 57 of these were motor vehicle businesses (Van den Tillaart et al. 1991). On the basis of the information obtained, the employees who were interviewed were divided into five groups, depending on the extent to which they actually used the in-service training of personnel as an instrument for dealing with problems in their business, resulting from new developments. Table 3.3 compares the data on motor vehicle businesses with that for other employers. The data shows that employers in motor vehicle businesses respond to or anticipate new developments through the in-service training of their personnel more than employers in other sectors.

There have been several studies in the sector to examine why participation in training is relatively low. For example, in 1988 the day release arrangement for training was evaluated in a study among 244 employers and 305 employees (OOMT, 1988). It showed that many employers (40%) and employees (57%) did not know of the arrangement; therefore ignorance of the training possibilities clearly plays a role. In addition, a substantial group appeared to be opposed to the arrangement; about 20–25% of the employers considered the arrangement unsuitable for the business, and preferred to have nothing to do with it. The KWW study of in-service training provisions in the sector show that the most important obstacles to participation were: lack of time, problems with absence of personnel; expensive; insufficiently geared to practical applications; or held too far away. The problem of absence particularly plays a role in small businesses. When someone from a small business goes to a course for a few days, this immediately makes a big difference to the manpower available. The ITS study also shows that the problem areas in the motor vehicle sector are not so much at the sectoral level as at the level of the businesses themselves. With regard to points such as the content and quality of the training provisions, their up-to-dateness, the accessibility and proximity of the provisions, the costs of training, the expertise of the instructors, and the support of the sector for training matters, the motor vehicle employers who were interviewed had few problems, or at least fewer than their colleagues in other sectors. They indicate that the most important problem areas are in the businesses themselves. There are still too many entrepreneurs who are insufficiently enterprising, i.e., they do not look around and ahead, and do not adequately understand the importance of training. In addition, in businesses which do recognize the importance of training, the problem of manpower is often a major bottleneck. Many smaller businesses cannot really afford absence for training purposes (Van den Tillaart et al., 1991).

5.8 New training policy in the sector

The training efforts of many employers and employees in the motor vehicle sector fall behind what is desirable in view of commercial and technological developments. To counter this, the sector has further intensified its training policy. The BOVAG defined 1991 as the "year of training", and in that year the training policy of the sector was stimulated.

The training and development fund, the OOMT, was reinforced. The fund was made the central policy-making body for the sector, so that all important decisions are now made jointly by managers and union members. The training in institutions of the apprenticeship system were taken over by the fund. As a result, the influence of employers' and employees' organizations on vocational training and in-service training courses increased; the influence of government and the education sector was reduced.

In addition, the position and tasks of the national training centre, the INNOVAM, were redefined. In the new structure, the INNOVAM particularly has the task of preparing and executing policy. As regards the training programmes themselves, the INNOVAM will have a co-ordinating function more than an execution function in the coming years. For this purpose, it has a new task – to serve as a centre of innovation and expertise, where employers can go with questions on new developments in technical, commercial and management fields.

A start has been made on decentralizing the (vocational) training and in-service training provisions to a number of Regional Practice Centres (RPCs). The aim is to establish 10–15 RPCs in the 1990–1993 period, geographically distributed as widely as possible throughout the Netherlands.

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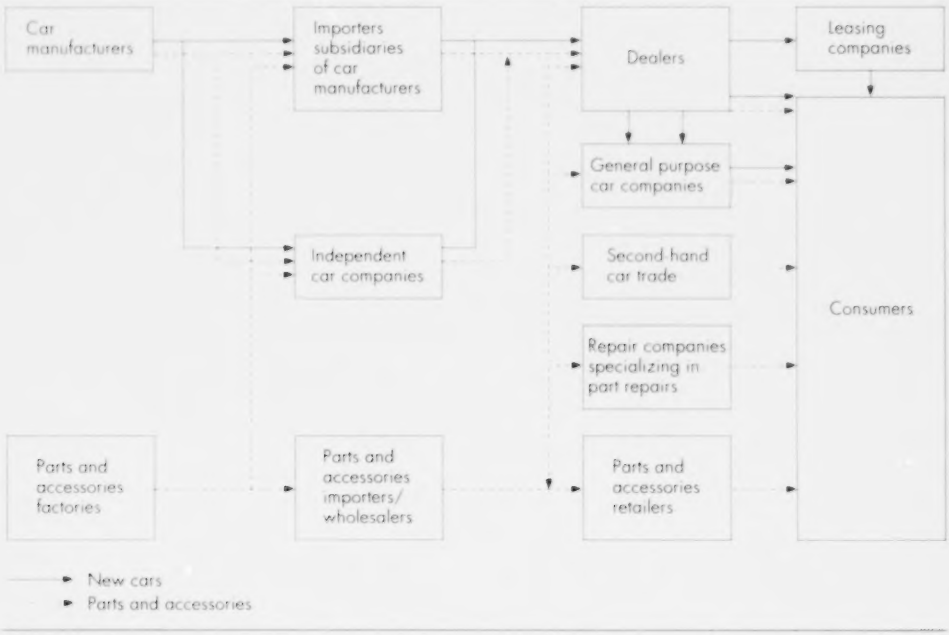
Training, courses and exams will increasingly be organized in these RPCs. The GOAs will also be incorporated in these RPCs. In addition, possible forms of co-operation will be sought with local secondary and further technical schools for regular daytime education. In this way an attempt is being made to bring training and the courses "as close as possible to the people".

A start has also been made on a number of experiments aimed at making the vocational training programmes more flexible. The programmes are divided into complete units (modules) which can be followed in combination with each other, but can also be done individually, and each one concludes with a certificate. In this way, training and courses can be geared more appropriately to the specific needs of individuals or groups of employees. In addition, the vocational training programmes can also be linked more satisfactorily to the programmes of other training institutions.

A start was also made on a system of training planning. Managers and union members drew up a training plan for several years for the sector on the basis of a study of the requirements (Riphagen et al., 1989), indicating the in-service training priorities for the next few years for every type of job.

Finally, plans have been developed to achieve a more appropriate provision of vocational training, dual training courses, and private training institutions, i.e., the importers. The INNOVAM developed a system defining the positions and tasks of the various training institutions (importers, INNOVAM, LTO schools) in relation to the innovation processes in the sector. To maintain a broad range of qualified experts for the sector, agreements were formulated on linking the provision of the in-service training of importers' training centres, the apprenticeship system and regular LTO and MTO education. Importers will take over training for new technology for specific makes during the innovation introduction stage. When a new technology is introduced on a broader scale, such as the ABS systems being introduced now, for example, they are included in training provided by the apprenticeship system. At an even later stage, when the new technology has become part of basic motor vehicle technology, it will be included in regular technical education. In this way technical innovations will gradually be included in the sector's training provisions for vocational qualifications.

Flow chart



Source: ABN 1990

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ANNEX

Tables and diagrams

1.

Table 1.1 – Number of companies in motor vehicle repair and sales sector

	1977	1983	1989	1990
Motor vehicle business (total)	7,686	8,414	10,700	10,800
including (sub)dealers				3,800
general motor vehicle business				1,400
second-hand car trade				3,100
repair shops				2,400
Car body repair shops				1,400
Retail trade in spare parts and accessories	446	503	600	600
Car repair shops (not included above)	358	449	600	600

Source: Central Bureau for Statistics

Table 1.2 – Production, wholesale trade and distribution of motor cars and their parts in 1990

Production:	
• motor car factories and assembly plants, car engine factories	48
• factories for trailers and semi-trailers	148
• bodywork factories	362
• factories for car parts	92
• bicycle and motor bicycle factories and assembly plants	44
• body construction plants	10
• factories for bicycle and motor bicycle spare parts and accessories	39
Wholesale trade:	
• wholesalers of motor cars, car accessories and spare parts	3,244
• wholesalers of bicycles, motor bicycles and mopeds (including parts and accessories)	323
Distributive trade:	
• distributors of motor cars, accessories and spare parts	176
• distributors of bicycles, motor bicycles and mopeds (including parts and accessories)	25
Repair shops for coaches and lorries	71
Breakers' yards (wholesale)	847
Breakers' yards (distribution)	60

Source: Chamber of Commerce, 1991

Table 1.3 – Number of companies in the motor vehicle sector

	1984	1987	1989
Companies < 10 employees	8,611	9,456	9,904
Companies 10 – 100 employees	1,329	1,222	1,324
Companies > 100 employees	25	14	15
Total	9,965	10,692	11,243

Source: CBS

Table 1.4 – Financial turnover (Statistisch jaarboek 1992) 1985 = 100

	1980	1985	1988	1989	1990
All companies of which	82	100	114	121	127
• motor car (sales) companies	83	100	113	120	126
• bodywork repair shops	91	100	132	144	162
• retail trade in parts and accessories	75	100	108	114	112

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Table 1.5 – Market share of the most important makes (RAI, ABN '90)

	1987	1988	1989
General Motors	16.1	14.0	14.1
Ford	10.1	10.1	10.3
Volkswagen/Audi	10.2	10.0	9.7
Peugeot	6.2	7.3	7.2
Japanese makes	25.9	27.6	26.2
Others	31.5	31.1	32.5
Total	100.0	100.0	100.0

Table 3.1 – Changes in the number of persons working per type of company 1977–1990

	1977	1983	1989	1990
Motor vehicle business (total) of which:	60,904	54,148	64,400	65,400
(sub)dealers			50,300	49,600
general-purpose motor vehicle companies			4,000	5,300
second-hand car trade			5,600	5,200
repair shops			4,400	5,300
Retail trade in parts and accessories	1,753	2,426	3,600	3,100
Car repair shops (not included in the above)	1,730	1,220	2,400	2,500
Total number of employees	64,387	57,794	70,400	71,000
Total number of cars (x 1000) including company cars	4,188	5,118	5,928	6,052
Average number of cars per employee	65	89	84	85

Source: CBS

Table 3.2 – Average number of persons working by type of company and function in 1990

	Owners/ Partner/ Family Member	Repair shop	Sales	Others	Total
Motor vehicle companies	0.9	3.2	0.7	1.3	6.1
of which: (sub)dealers	0.6	7.2	1.7	3.3	13.0
general purpose	1.1	1.9	0.3	0.4	3.8
second-hand car	1.1	0.5	0.1	0.1	1.7
repair	1.2	0.8	0.1	0.2	2.2
Retail parts and accessories	0.8	1.7	1.9	0.9	5.3

Source: CBS

Table 3.3 – Distribution of persons working by nature of employment

	1983	1989
Working proprietors and family members	15.8	20.7
employees > 15 hours per week	80.8	76.4
employees < 15 hours per week	3.5	3.2
employees working for others	–	0.2

Source: CBS

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Table 3.4 – Breakdown of jobs by function in small and large companies

	Repair shop	Stores	Sales	Administration	Management	Others
Small companies						
< 10 employees	66.3	2.5	15.4	6.9	5.9	3.0
Large companies						
10 employees	53.4	8.4	17.9	10.1	4.9	5.3
Total	57.2	6.6	17.2	9.2	5.2	4.6

Source: KWW 1988

Table 3.5 – Development of the job structure in the motor vehicle sector 1987–1995

Percentage of employees working as	1987	1992	1995
repair shop			
manager	6.0	5.3	4.8
foreman	6.0	5.5	5.1
chief mechanic	17.2	17.8	17.8
mechanic	19.0	18.0	17.2
trainer	0.7	0.7	0.6
apprentice mechanic	8.8	8.6	8.3
bodywork mechanic/sprayer	4.2	4.5	4.6
receptionist	6.3	6.8	7.1
store			
store manager	5.3	5.4	5.4
store employee	4.1	5.1	5.6
sales			
sales manager	1.5	1.4	1.5
salesman	8.1	7.7	8.4
administration			
administration manager	4.1	4.1	4.2
administration clerk	8.7	9.1	9.3

Source: Adapted from KWW 1988

Table 3.6 – Repair shop job functions 1988/expected developments by 1993

Percentage of time spent on	customer relations	diagnosis/ instruction	repairs administration	management
• head of company				
small company	27/+7	11/+2	28/–13	34/+4
large company	45/–	16/–	7/+1	32/–2
• foreman				
small company	24/+10	24/–1	35/–9	17/–1
large company	30/+1	30/+1	29/–4	11/+2
• instructor				
small company	25/+10	33/+10	25/–20	17/–
large company	8/–2	38/+26	5/–24	2/–
• chief mechanic				
small company	9/–	9/+2	78/–3	3/–1
large company	3/+1	12/+7	82/–9	3/–
• mechanic				
small company	7/–1	8/–6	82/+1	3/–1
large company	2/–1	6/–1	94/–2	1/+7
• apprentice mechanic				
large company	3/–3	5/–	89/+5	3/–2
small company	–/–	–/+2	97/–1	3/–

Source: KWW 1988

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Table 5.1 – Actual in-service training compared with regulatory requirements

	small companies	large dealers	total
Number of companies offering more free time for training than required by the regulations (one day per employee per year)	6	20	26
Companies providing the required free time	6	19	25
Companies not providing the required free time	6	8	14
Total	18	47	65

Source: KWW 1989

Table 5.2 – Average number of course days per employee by type of job function

Job	Expected number of course days per employee per year in 1988
Company head	2.7
Foreman	5.4
Chief mechanic	3.1
Mechanic/inspector	2.3
Instructor	7.9
Bodywork mechanic/sprayer	1.2
Receptionist	1.6
Repair shop administrator	3.6
Total average for all companies	2.6
Total average for small companies	2.0
Total average for large companies	2.9
Total average for importers	1.8
Total average for (INNO)VAM	0.5
Total average for others	0.3

Source: KWW 1988

Table 5.3 – Extent to which entrepreneurs use in-service training as a tool to adjust to market changes (%)

Type of behaviour companies	Car companies (n = 57)	All companies (n = 362)
1. Entrepreneur does not notice any changes	14	24
2. Entrepreneur does see changes but sees no need to adjust	18	18
3. Adjustments are made without any recourse to staff training	10	15
4. Adjustments are made but incompletely	18	25
5. Training of staff plays an important role in the adjustment process	40	19

Source: van den Tillaart et al. 1991

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PART 2:

1. **A small car repair shop, dealer for FSO and Yue Loong**
2. **A small car repair shop, without a dealership**
3. **A medium-sized Ford dealer**
4. **A large GM-Opel, BMW and Mitsubishi dealer**

1. A SMALL CAR REPAIR SHOP, DEALER FOR FSO AND YUE LOONG

1. General description of the case

This first case study describes the operation of a small, independent general motor vehicle repair and sales business, which is also a dealer for two fairly unusual makes of car. These two makes are imported into the Netherlands by the same importers' organization, and for technical in-service training activities, the business uses in particular the provisions and facilities provided by this importer. It is also in contact with INNOVAM in connection with the vocational training of one of its employees, and with private training establishments in the area for administrative in-service training activities. In addition, it has a number of contacts with LTO (lower technical training) and MTO (intermediate technical training) schools in the area for providing work experience for pupils. However, this case study particularly examines the technical in-service training activities, and two organizations are of central importance in this:

- the business itself, as the client of the in-service training courses;
- the importers' organization, which provides technical in-service training courses.

The developments in the business itself form the starting point for this report. In the description of the training activities, special attention will be devoted to training provided by the importer.

2. General description of the company

2.1 Location of the company

The business is situated in the northeast of the Netherlands. Since 1989, it has been accommodated in premises on a small industrial estate on the edge of a large city. It is close to the motorway, and easily accessible from different directions. The premises have a total surface area of approximately 500 square metres. Approximately three quarters of these are used as a showroom for the display of new and second-hand models. The back of the premises is equipped as a repair shop. There is one inspection ramp in the repair shop. One corner of the repair shop is a storeroom for parts. There is a small office next to the showroom which houses the computer, and is also used for receiving customers. There is direct access from the office to a house, which is built next to the premises, where the owner of the business and his family live.

2.2 Brand names, forms of distribution and repair

As stated above, this is a case study of a small, independent business for the sale, maintenance and repair of private cars. The business operated for a long time as a general motor vehicle business and still trades in all makes of cars, particularly second-hand ones. However, since 1988, it has also been a dealer, originally for one make, and since May 1992, for two different makes. Both these makes are unusual, and only have a very small share of the Dutch market.

Since 1988, the business has operated as a dealer for the Polish make FSO, which is not a very well-known name in the Netherlands, and belongs to the range of cheaper, mid-range cars. The importer is located in the west of the Netherlands, and has approximately 15 dealers throughout the country. This business is the dealer for the northeast region, and in particular for the provincial capital nearby. In 1988, FSO had just been introduced on to the Dutch market, and initially sales seemed to be developing very well. In the first year, 1988, the business sold about 100 FSOs, many more than had been expected. However, in 1989, developments in eastern Europe stopped this trend. Following the collapse of the Berlin Wall in November 1989, and the subsequent "opening up" of eastern Europe and the economies of the eastern bloc countries, a very negative image developed of eastern bloc products and demand slumped. The Dutch FSO organization also felt the consequences of these developments. In 1990, the market for FSOs collapsed completely in the Netherlands. In 1989, the business managed to sell 90 FSOs, but in 1990 it was unable to sell more than 15 cars. 1991 was also a bad year, and this was one of the reasons why the business ran into serious financial difficulties. However, the biggest problems now seem to have been overcome. In the past two years, sales have started to increase again, and it is expected that this trend will continue in the next few years. In 1992, the business sold 30 FSOs, and for 1993 it is expecting to sell 40.

Following the problems with FSO, the business turned to other makes in 1991. At the beginning of 1992, a dealership was concluded with the Taiwanese make, Yue Loong, in addition to the FSO dealership. This make is imported through the same importers' organization as FSO (the importer also imports the Mitsubishi and Hyundai makes). Yue Loong was introduced in the Netherlands in 1992. The importer has estimated that it should be possible to sell approximately 1,200 Yue Loongs in the Netherlands in the first year, of which 60 should be sold by this particular business. However, 1992 sales were extremely disappointing, partly because the prices were too high. In 1992, the business sold only 3 Yue Loongs, further compounding the difficulties which it already faced because of the problems with FSO. However, in response to the disappointing development, at the end of 1992 the importer started a number of campaigns to promote sales, and the effects of these are already noticeable. Nationally, sales of Yue Loongs doubled in the last months of 1992, and it is expected that sales will also increase in the northeast of the country in the near future. Because of these reasonable prospects, the business is continuing to operate as a dealer business, despite the current difficulties.

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According to the owner: "After all, building up a dealership is a long-term process".

A large part of the business's turnover comes from the purchase and sale of second-hand cars. In 1992, it sold almost 100 cars altogether, of which 70 were used cars. In this sector it deals in any make: "In principle, we buy just about anything". However, according to the owner, the variety in the work coming in to the general motor vehicle business is also constantly diminishing in the second-hand market, because of the increasing concentration of distribution and repair activities within the dealer networks. Importers oblige sales organizations/dealers to have special showrooms, use special tools, and follow special training courses. Larger dealer businesses increasingly make use of sub-dealers. However, this business wishes to continue operating as a general motor vehicle business in the second-hand car market.

Because of the disappointing sales of new cars, the business has intentionally moulded an image in the last few years as a general maintenance and repair business. An attempt has been made to keep the maintenance work at a satisfactory level by selling any make of second-hand cars. The maintenance and repair services of the business have been advertised more widely. In principle, it undertakes any sort of maintenance and repair on every make and type of private car. It does not turn down more specialized jobs, such as, for example, the repair of automatic gearboxes or electronic faults. The additional advertising has been aimed at specific jobs, such as the maintenance and replacement of batteries, shock absorbers, tyres and exhausts. In the last few years the business has attracted quite a lot of work involving the repair of LPG systems: "This is one of the most important ways of keeping the business afloat". Furthermore, the business is a recognized APK testing centre. The APK tests, usually carried out in combination with a service, bring a significant amount of money into the business. As regards maintenance and repairs, the business is an all-round general motor vehicle business. The owner maintains: "We have in-house knowledge to carry out every possible type of repair".

2.3 Structure of the company and human resources

The business is a true family business. At the time the study was carried out, four people were working in the business, all members of the same family.

- The father (53) established the business and is the owner. Altogether he has been working in the motor vehicle sector for 36 years, and as an independent operator for the last 20 years. Before that, he was employed for 16 years in a Volkswagen garage where he gained his mechanic's diploma and went through the whole career structure from apprentice mechanic to repair shop manager and to technical business manager. In this garage he was also an instructor, and as such, he was generally responsible for a group of approximately 12 apprentices. In 1972, he became self-employed.

- His wife (50) always worked in the business from the beginning, mainly in sales. She has not had any further education after secondary school.

- The son (24) has been a salaried employee since 1987. After his LTO education, he followed INNOVAM's primary and secondary vocational training course for Car Mechanic, and gained the diplomas for mechanic and chief mechanic. Currently he is taking a course for Motor Vehicle Business Manager, which is also run by INNOVAM, and which trains participants in running a business in the motor vehicle sector. Over the years he has had a great deal of practical experience in the family business ("running after his father from the age of four"). He is employed full time.

- The daughter (26) worked full time in the office from 1988–1992, doing the administration. Since the middle of 1992, she has worked part time, 9 hours a week. After her secondary education she took a vocational training course for administrative assistant, through the apprenticeship system.

In addition to these four people, a pupil from a lower technical training school (LTO) is doing a six-month work placement at the repair shop; he is not employed by the business.
The business has not always been as small as it is now. In the 1980s, there were still 13 employees, but as a result of financial difficulties, it had to cut back considerably after 1988. However, according to the owner, it is, if anything, rather understaffed at the moment. In view of the positive developments in car sales, he is considering employing another mechanic in the fairly near future.

Each member of the family has his or her own role and tasks in the business. As the owner, the father manages the business, does a great deal of buying and selling, and is active outside the business in all sorts of fields, including training. For example, he is a member of the BOVAG educational commission and the local advisory board of the district school. He spends 40 per cent of his time on mechanical work in the repair shop, "but only early in the morning or late at night, because usually there's not much spare time during the day". The son does the "technical work". As chief mechanic, he is responsible for the repair shop, and does all the work to be done there, with the help of the apprentice. He is not, or

is hardly involved in sales administration and is not very interested in this. The daughter works in the office and does the administration for the business, together with the accountant. She also does the secretarial work, such as dealing with post, correspondence, and so on. The owner's wife works in sales, and helps wherever she is needed, for example, meeting customers or picking up parts from dealers. There is a considerable degree of flexibility in this general division of tasks. The owner says: "Everyone has their own area, but within this, we are all versatile. We work very differently from a large business, where everything is laid down, prescribed, standardized, planned and budgeted. It doesn't work like that in our business. We don't count man hours in a business like ours. We try to achieve a certain turnover at a particular cost. In the last few years the whole family has really had to pull together to do this."

2.4 Brief history and recent strategy development

The development of the business, certainly in the past ten years, is described by the owner as having been "stormy, certainly stronger than gale force 12". In 1972, he started the business as a general repair shop, and it expanded considerably in a short time. From 1977 to 1980, the business operated as a Mitsubishi dealer. At that time it employed 13 employees and sold an average of 400 cars per year. However, in 1980, it ran into difficulties when part of the quayside on which the business premises were situated collapsed and the access road was closed. This meant that the business was no longer accessible, and had to be shut down after a few months with heavy financial losses. The owner then returned to his home town and managed to start another general motor vehicle business there in the same year. In the next seven years, he succeeded in almost completely making good the loss he had suffered in his first business, "with six people: the whole family and two mechanics".

In 1988, when trade was reasonable once again, the business became a dealer for FSO. According to the owner, his reason for becoming a dealer was the fact that a dealership leads to stronger identity and greater stability and continuity with the customers. The most important reason for choosing FSO was that FSO was a completely new make for which it would be possible to build up a completely new market; all the other makes were already well represented in the area. In the first year the sale of FSOs went very well, though the sales were concentrated in the neighbouring big city. In 1989, the business moved to its present premises in the city. The importer wanted his dealer to be situated closer to the customers, and the accessibility of the former premises was becoming a problem because the area where the business had been located was to become a 30-km zone. However, in 1990 the business once again faced difficulties. As mentioned above, the sale of FSOs completely collapsed in that year, which greatly reduced the business's income. At the same time, there were extra financial liabilities as a result of the purchase of the new premises, and problems with the sale of the old premises. Many of the regular customers in the village did not stay with the business, and it was still in the process of building up a new circle of customers in the city. Between 1990 and 1992, the business was on the brink of ruin, and there were severe problems with bank loans. The business had to cut back, and mechanics had to be dismissed. However, the worst problems have now been overcome. FSO sales are once again increasing. FSO cars are better adapted to modern West European requirements in terms of technology, design and comfort, a greater emphasis is now placed on the sale, maintenance and repair of second-hand cars, and in addition, the business recently became a dealer for a second make, Yue Loong, a make of car for which there are good prospects for the future, despite the disappointing sales in the introductory years. The owner is moderately optimistic about the future.

This optimism is partly due to the fact that the business was able to become a dealer business. The owner foresees increasing problems for general motor vehicle businesses because of the rapid technological developments in the sector: "New cars are increasingly using know-how which is specific to the make. This know-how is increasingly protected by the importers and dealers. This is one of the reasons why I have become a dealer myself". According to the owner, his present double dealership is probably a temporary matter: "Usually importers don't allow a double dealership, but in our case it's possible. These are two small makes. FSO isn't doing very well, and Yue Loong still has to get started. The two makes are both with the same importer, and they hardly compete with each other. That's why it's allowed. But when sales increase, there'll probably be some pressure to split it up."

2.5 Impact of new technology

Despite the difficult times which the business has had, investments have not been neglected in the past few years. New equipment has been purchased both for the repair shop and for the office, so that a better service can be provided.

This was very necessary in the repair shop. Quite a lot of new motor vehicle technology is used both in the modernized FSO models and in the new Yue Loong models. The new FSO models are cars which have been adapted to western norms in every respect. The development of these models has been geared to the requirements of the western consumer, not only in terms of design, performance and comfort, but also as regards technology. The new FSO has a complete computer-monitored injection and ignition system

which already complies with the American emission requirements that only come into force in the Netherlands in 1995. This system was first used in the 1989 models. It is based on a General Motors system which was bought by FSO from Opel, and was then further developed and adapted to the FSO technology by a Dutch research institute (TNO) commissioned by FSO, together with the importer. The TNO also developed special testing equipment for the system, and the dealers were obliged to purchase this. The importer himself developed special training courses for the mechanics of the dealer businesses. Dealers were obliged to send their employees to these training courses (see sections 3 and 4).

Since the early 1970s the business has had a SUN engine tester. This tester is upgraded every five or six years, "because you have to keep up to date. Modern cars can only be repaired with modern equipment". The tester currently being used was bought in 1987 and has a computer and a floppy disk on which the data about various makes of cars can be entered. A great deal of work is done with the tester. It is always used for full services, even if the customer himself has no complaints about the engine. The car is connected to the tester, and while the engine is running, the equipment indicates what is running properly and what is not. The technical documentation is then consulted to see exactly what is wrong. The floppy disks are not used very much for fault detection; the written documentation is used much more. Different documentation systems are available in the repair shop: various series of technical car manuals, detailed repair shop manuals for virtually all the different makes, and so-called "quick choice cards", cards with a concise, easy-to-use survey of the adjustment data of different types and makes of engines, which often make a quick diagnosis possible. According to the owner, working with the tester has many advantages over the conventional, more "instinctive" way of detecting faults: "In many businesses the testers are carefully kept under wraps, so that they don't get dirty, but that's not the case here. The tester works amazingly quickly. You immediately find out what's the matter. When detecting faults, you avoid going through all sorts of rituals which you've built up from experience, but which may be completely superfluous for a particular problem ... It's probably this – no, it isn't – then it's probably that, in that case. Well then ... etc. This is a thing of the past. Instead, you work in a purposeful way, and you can localize a fault immediately. That saves a great deal of time, and that's why we can manage very well in the repair shop, even with a minimum of manpower." In fact, it is above all the owner's son who uses the automatic tester. He has done various in-service training courses for this, and knows how the equipment works. The owner himself hardly uses it.

With the introduction of the FSO engine tuning system, the TNO developed special FSO testing equipment, which can be connected to the SUN tester. All FSO dealers were obliged to purchase this equipment; businesses which could or did not wish to purchase the equipment could not continue as FSO dealers. This business bought the equipment in 1989. It came with a manual for looking up information and possible causes of faults, also specially developed for FSO.

Apart from the engine tester, other modern equipment is also used:

- two fully automatic balancing machines; these calculate the location and extent of imbalances;
- a fully automatic tyre fitting system;
- modern alignment equipment; this works partly automatically, partly mechanically;
- various micrometers.

In addition, there are all sorts of new, modern tools in the repair shop (pneumatic hammer, torque wrench). The owner considers that: "If you want to do your work properly, you must use good tools". In 1989 a computer was installed in the office, and the business administration was computerized. On the advice of the BOVAG's regional service centre, a system was purchased which was specially developed for general motor vehicle businesses, and which was already being used by many garages in the area. It is a custom-made system designed for the motor vehicle industry, which has specific applications for the different types of motor vehicle businesses, the general business, dealers, dealers for two makes, and so on. The system was installed by the supplier, together with the business's accountant. The introduction of the system resulted in considerable labour savings. The owner's daughter, who does the business administration, used to work full-time in the office. She can now manage to do the administration working approximately one day a week. The delivery of the system did not include any training for the user (a negative point on the part of the supplier). For in-service training it was necessary to go to local establishments offering private courses (see section 4).

3. The provision of continuing vocational training

What were the implications of the developments outlined above for the training activities in the business, particularly the in-service training activities? We will try to answer this question in the following paragraphs. We will begin by looking at the training provisions in the business itself, and at the external provisions which the business can make use of. This is followed by an examination of the business's actual training activities in the past 5 years.

3.1 Structure in the company

In the first place, it is worth noting that the business often provides facilities for pupils at vocational training schools in the area, mainly LTO and KMBO [short intermediate vocational training] pupils, to acquire work experience. This indicates that there are reasonable facilities for learning on the job in the business itself. The work carried out in the repair shop is sufficiently varied to introduce pupils to a wide range of aspects of the mechanic's job. The repair shop has good, quite new equipment and tools, so that pupils can also become familiar with modern repair shop technology. There are good facilities for supervision; the owner himself is qualified as a practical instructor, and often acts as an examiner for the practical examinations of INNOVAM's vocational training courses. According to the owner, the business is often sent the LTO's "rather more difficult cases", pupils who for some reason are less easy to place in other businesses. In addition, the business participates in a Joint Training Activity (GOA), a form of co-operation between motor vehicle businesses in the area aimed at providing a combined range of practical places for apprentices following INNOVAM's Car Mechanic course. In this context, apprentice mechanics from other businesses often visit for practical instruction which they cannot get in the business where they are apprentices, e.g., working on particular types of carburettors and ignition systems. According to the owner, learning through practical tasks and work experience in a business are also very important for pupils undertaking initial vocational training. Schools cannot provide an adequate substitute for this, not even through practical lessons. On-the-job learning needs to be given more importance during the initial training.

In fact, the owner is aware of the problem that, with the application of new technology, opportunities for acquiring practical, on-the-job repair shop experience could become more rare. This is also the case in his own business: "Take the example of automatic balancing machines. An apprentice working with these does not really know what he is doing. He no longer has to find out where the problem lies, nor learn to approach things instinctively; he can only do what the machine tells him. In the end, he'll develop a feeling for it anyway, by doing things often enough, but from the point of view of training, it's actually rather a disadvantage". He points out a similar problem with regard to in-service training courses, particularly in-service training courses in electronics. The application of newly acquired knowledge and skills is difficult in practice because the new technology is often so good that it rarely goes wrong, and mechanics hardly get any chance for work experience with it. These sorts of transfer problems frequently arise in many general businesses which actively engage in in-service training.

3.2 Structure of importer's training centre

As an FSO and Yue Loong dealer, the business can make use of the training facilities provided by the importer of these two makes, for technical and commercial in-service training. This company is one of the larger independent import organizations on the Dutch market, and imports four makes: Mitsubishi, Hyundai, Yue Loong and FSO. The company consists of a holding company, with separate subsidiary companies for the different makes. In the case of Yue Loong, the company is the importer, not only for the Netherlands, but also for the rest of Europe. The organization as a whole is currently doing well, despite the problems with the small makes FSO and Yue Loong. The importer has his own training centre located at the organization's head office in the west of the country. Training provisions are laid down in the contracts concluded by the importer with the dealers. Usually a contract contains the general provision that the dealer is obliged to participate in the training prescribed by the importer. This training can cover various different fields: sales, engine technology, maintenance and repairs, and electronic applications.

The training for the different makes of cars is provided within the operating companies. For FSO, this is ABIMEX. ABIMEX does provide a particular package of courses for FSO, but these have not yet been integrated in a programme of courses like those organized for the larger makes. Some time ago, plans were drawn up for a more integrated programme with a clear structure and carefully defined, fixed procedures, but because of the problems with FSO sales, very little has come of these plans up to now. In the past few years, the whole FSO organization has been in serious difficulties, and neither the importer nor the dealers were very enthusiastic about putting more energy into training. Recently the plans have been looked at again, and now that prospects are better, more attention can be expected to be paid to in-service training. The owner we interviewed stated: "If it doesn't happen, I'll start pushing for it myself. In-service training is too important to leave any longer". He is in a good position to do this because he is also the chairman of the FSO dealer association.

The importer's after-sales manager is responsible for dealer training. He organizes the training and often carries it out himself. Sometimes he has it carried out by the service inspector, a sort of contact man between the importer and dealer businesses. Dealers can then raise specific questions – if necessary, through contact with the service inspector – so that these can be taken into consideration when organizing the training. The owner we interviewed said: "This works well, and in addition, the man knows the people in the businesses; he knows the standard, what different people can and cannot do, and where the

problems lie, and is able to gear the training to specific gaps or requirements".

With the introduction of the new modernized FSO models in 1989, the importer developed special in-service training courses in electronics, both for the new injection engine, and for the new testing equipment that is required. The courses were made compulsory for all dealers on the basis of the training clauses in the dealer contracts. The courses were given simultaneously with the introduction of the new type of engine, and were organized to a strict schedule. The dealers were informed well in advance of the dates and content of the courses. The target group for this course was employees at chief mechanic level. A distinction was made between two categories: employees with a recognized diploma for chief mechanic, and employees with broad work experience who did not have this diploma, but were working at the level of chief mechanic in practice. Both groups were admitted to the in-service training courses. However, the training led to quite a few problems, particularly for the mechanics in the second category. The owner we interviewed stated: "Many of our mechanics did not have sufficient theoretical knowledge to be able to follow these courses properly. The older mechanics from smaller businesses in particular have very little understanding of subjects such as electronics. The younger mechanics, even those without a diploma, have a greater understanding; they have often been introduced to the subject during their vocational training. However, this area is becoming a must. In fact, this is a general problem in the sector, and in the last few years INNOVAM has also actively tried to do something about this." The problems resulted in the importer withdrawing the FSO dealership from a number of dealers who were unable to gain sufficient qualifications.
In the business we studied, the son, as the chief mechanic in the repair shop, followed the prescribed FSO training courses.

For Yue Loong, there is no fully-fledged training programme available as yet, though the importer has developed a number of separate courses, including some commercial training and short courses on the car as such, and the electronics used in it. However, there is not yet any sort of complete training programme. The make is still too new on the market, and sales in the Netherlands are still too low. At the moment, the importer's priority is sales policy. It can be expected that increased sales will mean that more attention will be devoted to training policy.

3.3 Other institutions

In the last few years the business has also been in contact with institutions other than the importer in connection with training activities and in-service training. The owner's son followed INNOVAM's complete vocational training course for chief mechanic; at the moment, he is doing the business management programme. For further information about INNOVAM, reference is made to the sector study. For in-service training in administration and the use of the computer, the daughter took advantage of courses provided by a number of private training centres in the locality. These are commercial institutions which offer a permanent range of paid courses open to anyone. One of these institutions is a large institution working at national and international level, which specializes in basic courses and in-service training courses for administrative and secretarial jobs. In addition, she made use of the opportunities provided by ECABO, the apprenticeship system for economic and administrative jobs. This institution, which is comparable to INNOVAM, provides the recognized vocational training in this sector.

4. Training policy of the company

4.1 Training plans and concepts on repair shop level

The training plans and activities of this small family business are strongly coloured by the owner's personal views on training, and by his children's job and career requirements. The owner is strongly committed to the idea of training, and sees it as essential, particularly for small, general motor vehicle businesses, if they are to keep their heads above water in the present difficult climate for the motor vehicle sector. He not only encourages training in his own business, but is also extremely active in the area and in the sector. He is the chairman of a local advisory commission on education in industry, where all sorts of schools and companies in the area discuss matters. As an employer providing work experience facilities, he has a lot of contact with LBO, KMBO and SBBO schools in the area. He is a member of the BOVAG's educational commission, and a BOVAG examiner for all categories of motor vehicles. In his own business he is responsible for the practical supervision of apprentices and other trainees.
He participates actively in national and local discussion groups on questions of education and training.

Given his awareness of the need for training, he has, in his own business, particularly encouraged his son to achieve the highest possible level of technical expertise through vocational and in-service training. He gives less priority to his own in-service training, particularly the in-service training in the latest technology. He states that the division between "old style" and "new style" mechanics, which is characteristic of the entire sector, can also be seen in his own business: "There are many older people in the sector who learned their job through practical experience and who did not have much schooling in the past, and now find it difficult to follow the latest developments; everything is becoming more theoretical. You have to know more about systems and so on. It is all less specific. Then there are the younger

mechanics, who have a much better theoretical basis as a result of their vocational training, as well as much more new knowledge, and who are much more able to keep up with the latest developments through in-service training because of this basis. This also applies in our own business. My son does the technical work in the repair shop, and he does the in-service training for it. I hardly do any of that work. In the past you learned through practical experience, and you worked your way up from assistant mechanic to repair shop manager. Now you need much more theoretical knowledge, and for many young people, the path to becoming a fully qualified mechanic is much shorter because they have a good vocational training." The owner has a clear idea of his son's career, with vocational training as a priority. In addition, he regularly takes part in technical in-service training courses for specific makes, provided by the importer.

4.2 Interlinkage of training concepts and demand

The training activities in the business are based both on career ambitions and on the specific requirements of the business. No systematic analyses are drawn up of the specific qualifications which are required. As regards vocational training, the standard training for the sector was chosen. With regard to technical in-service training courses, use is made of the training developed and prescribed by the importer. In both cases the provision on offer is used. As regards administrative in-service training, suitable courses were found by the business itself. The specific courses were always chosen on an ad hoc basis, based primarily on how far the course appeared to answer the specific need for training arising at a particular point.

4.3 Training activities since 1987

In the past few years, it has been particularly the owner's son and daughter who have followed in-service training courses. The owner himself completed only two short training courses in sales, in 1990, with the FSO importer, and in 1992, with the Yue Loong importer. Both courses lasted one day, and consisted of a combination of lectures, a discussion on sales proposals, looking at model letters, and exercises in introducing, conducting and concluding sales talks. After each training course, the importer gave the dealer a certificate of participation. The owner's wife has not taken any courses in the past few years.

In the past few years, the owner's son has completed INNOVAM's vocational training courses for second and chief mechanic, which took a total of five years. Currently he is taking the motor vehicle business manager training course, which is also run by INNOVAM. This diploma entitles its holder to establish an independent motor vehicle business. He is doing only the theoretical part of this course, viz., the management subjects and has been given an exemption for the technical subjects. This partial course comprises 20 evenings (one evening per week). The course consists of a fixed programme of lessons laid down by INNOVAM. Apart from the vocational training courses, he has also done some technical in-service training courses over the past few years, mainly for FSO:

- In 1989, a gearbox course with the FSO importer. The course focused on the technology: How does it fit together? What can break down? How it can break down? How should it be repaired? The course lasted one day, with technical theory in the morning and a practical component in the afternoon. The participants were put into groups of four, given a broken gearbox, and told to repair it. They had to take it apart and then put it back together. At the end, they were awarded a certificate.

- In 1990, an engine training course with FSO which looked at the technology of the engine, the ignition, the cylinder heads etc., testing and tuning, and at any repairs that might be required. The course had a strong practical content. The participants were presented with a car which was running badly, and were told to find out what was wrong and trace the causes. A certificate was also awarded for this course.

- In 1990, an injection course by FSO aimed at testing and servicing the new electronic injection and ignition system. The course lasted one day and included training with the new testing equipment. Programmes were run through together with the instructor, the related manual was discussed, and exercises were undertaken with floppy disks on a special PC. There was a practical exercise which consisted of remedying faults in the engine. The training lasted one day. In the words of the owner's son: "After that you know how it works, but you need more to be able to go on further. You have to work with it to gain experience, and this is the problem. Since then we have only had 8 electronic faults altogether to deal with, one of which could not be found. That car went back to the importer, who solved the problem, but then you still don't know what the problem was. You have too little opportunity for any practical experience." However, he followed up the course in his father's business in a very original way: "I made an injection version from a carburettor version, took the new system from a modern, damaged car, and built it into an old model. The importer thought it was an excellent initiative, and was pleased to supply some parts for it." According to the owner of the business, this method of self-training, i.e., simple, practical experience, is really the "only good way to learn". For the time being, the owner's son wishes to concentrate on his diploma for motor vehicle business manager,

and the in-service training courses are out of the picture for the time being. At the end of that course, he may follow INNOVAM's BTE course, but that will depend on his enthusiasm at the time, and on whether this will be practicable in view of the work coming into the business.

Since 1987, the owner's daughter has completed four computer courses, including a basic computer course lasting several months aimed at the operation of computer systems and learning to use computers. When the new system was installed in the office, she followed a short user course. The supplier of this system did not provide any training, but did provide a detailed information and instruction package which she used to learn the new system as she was working. She also compiled a documentation system for her own use containing the information she gathered from consulting the supplier by telephone when the system ran into trouble. For a short time she also joined a user's club in the area, which practised using PCs and office software.

In addition, she followed a basic administrative assistant course under the apprenticeship system for economic and administrative jobs.

4.4 Costs of continuing vocational training

The owner does not know exactly what costs were involved in the in-service training activities. For him they are rather difficult to estimate: "In a family business like ours, we go about this very differently from a large business, where everything is arranged, planned and budgeted. We don't have a special budget for it. We don't count man hours here, and we don't keep a record of costs as such. We try to achieve a certain turnover, and then cost it up later." However, the owner does not consider that he was sparing with regard to study costs, even during the years that the business was in financial difficulties.

According to the owner's estimate, an average of at least NLG 1,000 has been spent on training every year over the last few years. His son's vocational training courses cost approximately NLG 500 a year. His daughter's computer courses also came to at least NLG 500 a year. The training courses provided by the importer did not involve any costs, neither did the owner's own commercial courses, nor his son's technical courses. Obviously this sum does not take into account the non-productive hours resulting from absence for training. The son was generally absent one or two days a week for his vocational training. The in-service training courses for father and son took up on average one or two days per year.

On the basis of the day-release arrangement for training which has been agreed in the sector, the owner is entitled to a reimbursement of one day's training per year. Obviously this arrangement does apply, but according to the owner, it actually has little effect in a small family business: "We don't count man hours. For example, my son is still owed a large number of days holiday for last year." Days spent on importer's courses are not eligible for reimbursement; the costs of these courses are included in normal overheads.

5. Evaluation of the training concepts

5.1 Evaluation of the training activities

The people concerned – the owner and the mechanic – consider that in the past few years the business has been able to meet its training requirements in an adequate fashion, and they are reasonably satisfied with the variety of in-service training courses which are currently available.

They expect that the provision of training by the importer in particular will improve in the next few years, now that commercial developments seem to be moving in the right direction, both for FSO and for Yue Loong.

As mentioned earlier, they do both point to problems with regard to the application in practice of the newly acquired knowledge of electronics, though they consider that this is a problem not only in their own business, but throughout the sector. The owner states: "The problem with electronics courses is that you hardly ever get any faults. The electronics rarely break down, so you don't get any work experience. In many smaller general motor vehicle businesses, you find that there is always just one man, the chief mechanic, with knowledge of this field, and all the work is concentrated on this man. The business starts to depend on him too much, and problems arise when he's no longer there. A general complaint after the BTE course is: you know it all, but you don't get the chance to apply it, because nothing ever breaks down.

The BOVAG's regional service centre in the area where the business is located had plans to set up a central repair shop for all electronic faults, but these plans never got off the ground because of a lack of co-operation on the part of the dealer businesses. The owner said: "It didn't work, because every make has its own systems, and the dealers won't always provide the information about these makes. In this way the dealers try to protect their own markets. This problem is getting worse all the time."

5.2 Good practice versus normal practice

Although he does not think his business leads the field, the owner does think he does more about training and in-service training than the average, small motor vehicle business. Most of the smaller general motor vehicle businesses in the area are less active. One of the reasons for this is that they are heavily dependent on INNOVAM training

courses, and the INNOVAM training centre is too far away. The long travelling time seems to give rise to problems for many mechanics. However, last year INNOVAM decided to decentralize its training provisions, and a new Regional Practice Centre has recently opened in the east of the Netherlands. The owner expects that many businesses in the area will start doing more about training in the next few years because they will be faced with more and more problems in connection with gaps in knowledge.

5.3 Future demand for continuing vocational training

According to the owner, the next few years will see a continuing need for regular in-service training in the technical field. The provision of such training by importers can be expected to expand. In terms of content, the emphasis will be on in-service training in electronics. The owner has no specific ideas or plans in this area at the moment. It will depend on the courses the importer provides and on developments as to the work coming into the repair shop.

6. Conclusions in relation to good practice and normal practice

This first case study concerns a small motor vehicle business that has not had an easy time in commercial and financial terms in the last few years. We described the role which training and in-service training have played in the business's attempts to keep its head above water under the "stormy conditions, worse than gale force 12" described by the owner. The business seems to be aiming primarily at acquiring a broad basic knowledge through the vocational training courses available in the sector. On this basis, it is attempting, by means of in-service training courses, to meet the specific requirements of the business which are the result of new developments in product and repair shop technology. Wherever possible, the courses which are on offer or are compulsory (importer's technical in-service training) are followed. Where necessary, the owner looks, on his own initiative, for a course which adequately answers the business's specific training requirement (in-service training for office computerization). This training strategy, which is by no means unrelated to the owner's own strong personal involvement in training matters, is one of the factors which has helped the business to keep going.

2. A SMALL CAR REPAIR SHOP, WITHOUT DEALERSHIP

1. General description of the case

The second case study describes in-service training practice in a small, independent, general motor vehicle business located in the centre of the Netherlands. For the in-service training of its employees, this business particularly relies on the training provided by INNOVAM, the national vocational training institute for the motor vehicle sector. INNOVAM's courses are given at an educational establishment in the area, the district school for day-release vocational training (SBBO); this district school also provides the theoretical component of the specialist courses of the apprenticeship system covered by INNOVAM. Therefore the case network comprises three organizations:

- the motor vehicle business, as the client for the in-service training courses;
- the vocational training institute, INNOVAM, which develops the courses;
- the district school for day-release vocational training which runs the courses.

The developments in the motor vehicle business form the centre of the report. In the description of the training activities in the business, special attention is devoted to the training provisions of INNOVAM and the district school. The business has also had occasional contact with other educational establishments in the area, but these were concerned with very specific training requirements. These establishments are not discussed in further detail here. However, a special section is devoted to the training possibilities in the business itself.

2. General description of the firm

2.1 Location of the firm

As stated above, this case study concerns a small, independent motor vehicle business in a small provincial town in the centre of the Netherlands. The business is located in the town centre near a large Opel garage, and has its business premises on a single site. The back of the premises is a repair shop, the front comprises the reception area, the stores, and a small shop for motor vehicle accessories, such as cleaning products, lubricants, seat covers, car radios, etc. The surface area of the repair shop is approximately 140 m^2, with an additional 100 m^2 for the shop, stores and reception area. The repair shop has three inspection ramps, of which one is located in a part of the repair shop organized as a "damage corner". Originally there was a petrol pump in front of the premises, which was used by the business, but this was removed at the beginning of 1992. The space created in this way is now used as a parking area. Next to the repair shop, to the side of the premises, there is another, larger parking area. The owner's house is next to this parking area. Part of the house is used as an office.

2.2 Forms of repair and distribution

The business is a general motor vehicle business for the repair and sales of private cars. It is not linked to one particular make, like a dealer business, but in principle sells, maintains and repairs every make of private car. A large part of the business turnover consists of the sale of private cars. About 80% of the sales are for second-hand cars bought privately; the other 20% are new cars, which are obtained from dealer businesses in the area. Although all makes are sold in principle, one make, i.e. Toyota, dominates. In addition, a relatively large number of Opels have been sold in the past few years. Recently there has been a significant increase in the car sales. In 1992, 80 cars were sold, 75 of which were used cars, which is 20 per cent more than in 1991. In 1987, only half the number of cars were sold, viz, 40 second-hand cars and 6 new cars.

The repair shop turnover results from the maintenance and repair of all the makes of cars which are brought in. The ordinary servicing of (second-hand) cars bought from the business form an important source of income; about 70% of all the customers are permanent customers whose cars are maintained by the business. In addition, a relatively large amount of time is devoted to preparing second-hand cars for sale. Quite a lot of the repair work involves older cars, i.e. cars which are five years and older. This is also related to the type of customers, and the business's approach to its customers. The manager stated: "We do a lot of work for the rather older customers in the area. What we do is to sell these people a good second-hand car, and then try to help them drive the car as long as possible, to keep the car on the road as long as possible." This approach means that a relatively large number of repair shop hours are spent on bodywork maintenance, a type of maintenance work which arises particularly for older cars. In recent years, the repair shop has also dealt with an increasing amount of repair work for damages, often as additional work to fill any "empty hours". Damaged cars are bought in and repaired, and then sold on to the customer. The Toyota make also dominates this sort of repair work, partly because a relatively large number of damaged Toyotas are bought in. Calculated in terms of hourly wages, the repair shop turnover as a proportion of the total annual business turnover is slightly less than 10%.

The total business turnover is fairly stable, and has been fluctuating between 1.3 and 1.6 million guilders for about ten years. Until this year about half of this turnover came from the exploitation of the petrol pump. However, the pump was removed at the beginning of 1992. Therefore the turnover for this year will be lower than usual, but not that much lower, because the loss of income from

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petrol had already been compensated to a large extent by increased car sales, even in 1992. With the sale of even more cars in the next few years, it is expected that the turnover will soon regain its former level.

2.3 Human resources

At the time of the case study, the business employed six persons:

- the owner (49 years of age); being himself a car mechanic, he started the business in 1972; previously he worked as a mechanic and assistant-manager in a Mercedes-repair shop;
- the owners' wife (44 years); she worked in the firm from the beginning; she assists in sales and does the administration of the business; she graduated from a laboratory-school;
- one older first mechanic (49 years), already 12 years in service of the company; he followed the training programmes of the apprenticeship system for first mechanic and also took courses on repair shop organization and management; he is the informal head of the repair shop;
- one younger mechanic (20 years); he graduated on the LTO and is following the apprenticeship training for first car mechanic at the moment;
- two apprentices (17 and 19 years), both less than 2 years in service; one has an LTO certificate, the other has 3 years further general education; both have a work-training contract with the company.

From 1976 to 1990 another mechanic was working in the company, a very experienced man who recently specialized in car electronics. Some years ago he left the firm for another one.

2.4 Structure of the firm

In legal terms, the firm has the status of a one-person business. It is owned by the manager and his wife, who are both active in the business. The manager/owner is responsible for sales, reception, the co-ordination of the work, the supervision of the repair shop, and some of the repair shop administration. His wife does the general administration work and occasionally helps with sales. In addition, she maintains the contacts with the employers' organization (BOVAG), and is a member of the management of the sector's training and development fund (OOMT).

The business currently employs 4 mechanics for the maintenance and repair work: a very experienced, rather older chief mechanic, who has been working for the business for more than 12 years; a younger, slightly less experienced second mechanic, who has been employed for over 4 years, and two apprentice mechanics, who were only recently employed and have a temporary contract in the form of an apprenticeship agreement for the period of their training, in this case for 2 years. For a long time a third mechanic had been employed, also an experienced man who had specialized in electrical and electronic work. However, he left for another business two years ago, and the two apprentices were recruited in his place. There is a certain division of tasks between the mechanics. The chief mechanic is also the repair shop manager, and as such, he supervises the work together with the owner. In addition, he is an instructor and supervises the two apprentices with regard to the practical components of their vocational training. As an experienced expert, he also does the more specialized work on damages and any electrical and electronic repairs which come up. The second mechanic, who is currently training to become a chief mechanic, does the more difficult repairs and the measurement and adjustment work involved in services and engine repairs. In addition, he does electrical and electronic repairs, together with the chief mechanic. He has also applied himself to working with the computer-monitored testing equipment, which has been used for a number of years (see section 2.2). The other employees usually leave this to him, although the chief mechanic does know how the equipment works and how it can be used. Finally, the two apprentices do the normal services, assist the two mechanics, occasionally do some of the smaller repairs under supervision, and work on preparing cars so that they are ready to be sold. Until recently, the business also had a mechanic who had become more specialized in the electronic work involved in cars. When this employee left, this area of specialization was lost. The loss has been partly compensated because one of the other mechanics has started a training course in this field, but up to now, this training has not reached the level that was lost (also see section 4). As regards particular makes or models of cars, there is no specialization in the repair shop. In this respect, the mechanics are employed in an "all-round" capacity.

The owner does little or no work in the repair shop himself, though he does meet the customers, sees what has to be done, schedules the work, and divides the jobs amongst the mechanics. He also makes the appointments. Every morning he goes through the day's schedule with the mechanics, and gives everyone their jobs for the day. In dividing up the work he takes into account as far as possible everyone's strengths and weaknesses; when allocating work to the apprentice mechanics, he also sees what they have to do in the context of their training. In addition, he keeps an eye on the progress of work, and checks the cars which are ready to be delivered. It is only in the owner's absence that the mechanics accept work themselves, plan appointments and divide up the jobs amongst themselves. All the mechanics are

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employed full time, i.e., 5 days a week, 8 hours a day. The two apprentices go to the district school one day a week for the theoretical component of their vocational training.

According to the owner, the capacity of the repair shop is currently slightly too large with two apprentices, and it is by no means certain whether it will be possible to employ both apprentices permanently when they have completed their training. The two apprentices have different educational backgrounds. One of them has a technical basic training, viz., LTO (lower technical education), specialized in motor vehicle technology. He also followed several months of an MTO (intermediate technical education) bridging class, but gave up because he found it "too theoretical". Nevertheless, he wanted to work with cars and already had a Saturday job in the business. Then he asked if he could become an apprentice in the business to follow the vocational training under the apprenticeship system. The owner agreed to this. The second apprentice was an early school leaver from the general educational system. He had three years of secondary education (HAVO), did not wish to stay at school, and wanted to become a car mechanic. He managed to get some work experience in the business through an advisor in the apprenticeship system. Following this work experience, he wished to do the vocational training, and also applied to be taken on as an apprentice in the business. The owner also accepted his application, partly because there was an undercapacity in the repair shop because at the same time that one of the mechanics resigned, one left temporarily to do his military service.

The owner feels it is not very clear which of the two basic types of education, the technical education or the (unfinished) general education, forms the best background for working with cars: "Of course, for someone without a basic technical it's not easy at first, because they know hardly anything about technology, have very little knowledge of tools, equipment and materials, and this is a big disadvantage. But in practice, the two apprentices are progressing at the same rate. Moreover, the LTO also provides only a limited knowledge of materials and equipment. There may be some wonderful testing equipment at those schools, but too little attention is devoted to which materials and tools should be used."

2.5 Brief history and recent strategy development

The business has been operating as an independent company for a fairly long time. It was established in 1972 by the present owner, who was previously employed as a repair shop manager for a Mercedes garage in the west of the country. For the first five years he was tied by a petrol company from which he rented the premises, but in 1977 he purchased the premises and severed the ties with the petrol company to "have more freedom in his work". In the first five years there was a significant growth in the repair shop's number of customers. In 1972, he employed the first mechanic, and after four years, this number had increased to 3 mechanics. In addition, the owner still worked in the repair shop himself. Since 1985, there has been a relatively stable level of 4 mechanics, of whom 3 are currently involved in training.

The business has always been an independent, general motor vehicle business. In the past, the business was approached several times with the request to become a (sub) dealer business, but it has always chosen to remain independent. Business is going reasonably well, the firm has built up a good position in the region and has a large circle of permanent customers. The owner does not wish his activities to be unnecessarily restricted by a dealership contract. He attaches great importance to his independent position: "A dealership restricts you as regards your own exploitation and expansion." One of the business's strong points at the moment is the possibility of providing extra quality by putting more hours into certain activities and building up good personal relationships of trust with customers, so that these customers continue to return. In addition, as an independent business, it is possible to be slightly selective with regard to the customers, and this is not so easy for a business specializing in a particular make. The business particularly wants to work for customers who like certainty and durability, who "give us the space to do serious work", and who are prepared to pay slightly more for this. These are usually rather older customers. The business is clearly less interested in "the bravado attitude" sometimes found amongst younger people.

According to the owner, this approach to keeping a constant circle of permanent, trusted customers who appreciate high quality work, provides the business with an adequate basis for not having to fear the competition of the larger dealer businesses in the future. Nor is he really afraid of any attempts of dealer businesses to corner the market as a result of all sorts of new electronic applications in cars used in specific makes: "This risk certainly exists, but you hope that you can keep up as far as possible with training. However, as a general motor vehicle business, you will never have access to the very latest information."

2.6 Impact of new technology

In recent years, micro-electronics have also been introduced into the business. More and more cars which are equipped with electronic systems come into the repair shop. The business has purchased new, computer-monitored measurement and testing equipment, and recently most of the business administration was computerized.

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Although the business is increasingly concerned with motor vehicle electronics, the proportion of electronic work in the repair shop turnover is still relatively small, because it deals with a relatively large number of older cars in which electronics have not been used so much. On average, 1–2 per cent of the repair shop hours are devoted to electronic repairs per month, and according to the owner, the developments in this field can be "reasonably" followed with the expertise available in the business. In the context of their training or in-service training, both mechanics have acquired the knowledge required in this field (also see section 4). However, the owner does say that it is a problem that it is not possible to acquire sufficient experience in practice because the business works a great deal with Toyotas, and Toyota electronics seldom break down. In principle, electronic repairs are carried out by the repair shop itself as far as possible. This applies not only to routine jobs, but more complex repairs are also carried out in-house as far as possible, and even "unique" cases, for example, specific modifications to an alarm system, are not turned down. The owner stated: "This often requires a degree of inventiveness, sorting things out yourselves, trying things out, and so on. We are almost always able to do something. It often takes more hours, which you cannot always charge to the customer, but on the other hand, you also learn something from it." It is only when the mechanics really cannot solve a problem that the work is sub-contracted to a specialist firm. There are several electronics specialists operating in the area, in many cases linked to Bosch sales and service points which are also regularly consulted in the electrical field, for example, for the rewinding of starter motors and dynamos. According to the owner, these specialist businesses have more experience, better testing equipment, and more parts available for "exchanging components occasionally, as electronic repairs are often a matter of finding approximately where the problem lies, replacing components in that area, and then trying out how it works." However, as stated above, work is seldom sub-contracted – at most two or three times a year. The electronic repairs are usually carried out by the chief mechanic.

In 1990, the business purchased new computer-monitored testing equipment, a universal engine tester (Crypton Cudos) which can measure engine performance for all the different makes of cars. It comprises a diskette station, and is provided with diskettes containing the tuning data of the different makes and types of engine. The data are regularly updated and entered on new diskettes, which can be purchased. When the business bought the tester, it ordered only the diskettes for those makes which it works on regularly. In addition, it has a subscription to a microfiche system with engine and tuning data of all the makes, and to a series of technical manuals which are also regularly updated and supplemented. With the tester, a number of test programmes can be run automatically. For example, there is a diagnostic programme in which the tester makes a number of standard measurements on the engine system (battery, ignition coil, spark plugs, cylinders, injection, ignition, emissions etc.). The results are compared with the indicated tolerance limits (min-max), and an error message is given if these limits are exceeded. There is a component programme which works through standard test programmes for the various parts of the engine system. There is also a diagnostic programme for which the mechanic enters (a combination of) complaints, and for which the tester then indicates which test programmes must be run; in addition, it indicates which checks the mechanic must carry out in advance so that the tests can be carried out, and which steps he should not carry out to make sure that the tests are not disrupted. The system also has a help programme which the mechanic can consult if he does not find what he wants in the standard menu. The test results are printed out in a customer report, which can also include the results of a number of manual and visual inspections of the car. If a customer wishes, the mechanic can also give him an additional explanation. The tester is used regularly. A car is connected up to it, usually by the second mechanic, who has mastered the operation of the equipment. According to the owner, the return on the equipment is rather disappointing: sorting out which data have to be used is very time consuming, finding the problem often takes a great deal of time, and running the test programmes also takes up a lot of time. Another problem is that sometimes the data are not available on the latest types of engines or on less common makes and types of engine. For this information, one is dependent on the dealers concerned. In most cases this information can be obtained because good contacts have been built up with the dealer businesses in the area.

The administration of the business was computerized at the end of 1991. Following some investigation of what was available, a PC system was purchased which was specifically designed for general motor vehicle businesses. The system includes the repair shop administration, the sales administration and the financial administration. The stores administration was left out because it is too small. The new system has hardly had any impact for the mechanics in the repair shop, though it has for the manager and his wife, who is responsible for the administration. They work with the system most, and have had to learn to use it. For this purpose they have followed various in-service training courses with the system supplier (also see section 4).

3. The provision of continuing vocational training

What response has there been in the business to these new developments? To what extent have they led to a need for training, and have steps

been taken to meet these needs? What role has in-service training played in this context? These are the questions which are dealt with in the following sections. We begin by describing the training provisions in and around the business. The subsequent sections then explore the specific training activities.

3.1 Structure in the firm

Although the business does not have its own training department or "training corner" – it is too small for this – this does not mean that there are no provisions for training. There are good provisions for the vocational training of the apprentice employees, and there are very good possibilities for learning in the repair shop.

The business is an apprentice business recognized by INNOVAM, i.e., it is competent to conclude an apprenticeship agreement with (new) employees for vocational training in the context of the apprenticeship system, and is responsible for the practical part of the training, while allowing the apprentice to go to school one day a week for the theoretical component. It was given this recognition because it provides adequate varied work of a sufficient level, and because it has adequate facilities for the practical supervision of apprentices. Both the owner himself and the chief mechanic are qualified practical instructors, and as such they are qualified to train and supervise apprentices. In practice, the chief mechanic is usually responsible for the day-to-day supervision of the apprentices, while the owner keeps an eye on the overall progress of their training and maintains contacts with the school and the apprenticeship advisor. In allocating tasks to the apprentices, he takes into account as far as possible the progress of their training. ("This starts with polishing cars, then small servicing jobs, full services, getting cars ready for the road, small repairs, assisting with large repairs, etc.") In addition, the two apprentices who are employed now sometimes go to other motor vehicle businesses in the area to gain experience of work which is not carried out in this business, and "to see how things are done elsewhere". These businesses are members of a GOA, a regional form of co-operation which exchanges apprentices on a regular basis, and to which this business is also affiliated. Moreover, the apprentices regularly go to a Regional Practical Centre recently opened by INNOVAM, where they can carry out more specialized practical tasks. However, the most important part of their training is on the job in their own repair shop.

In fact, according to the owner, the possibilities of training or in-service training in the repair shop are very good, and much better than in most dealer businesses. The business is a general motor vehicle business with every make of car, where all sorts of repairs are carried out, so that knowledge and experience can be acquired with many different types and systems. The business also has fewer overheads than dealer businesses, so that more production hours can be provided for the same price. This makes it possible to take more time for certain less frequent types of work, and to use this space for "sorting things out" and learning something from it; this regularly happens with more difficult repairs to electrical and electronic systems. In addition, extensive technical documentation is available in the repair shop on virtually all makes of cars (repair shop manuals, microfiche system, database, testing equipment), and the mechanics can use these to sort things out themselves. They can also update their own level of knowledge by consulting dealers and specialists about new or less common types of cars, engines or parts. Finally, it is very important that the mechanics work together a lot as a small group, and that they can easily consult each other when they cannot solve a problem themselves. One should not underestimate the importance of all these forms of training at work for maintaining and increasing the mechanic's level of knowledge.

3.2 Structure of trade association centre

For official off-the-job training, the business is necessarily dependent on the training and in-service training provisions of INNOVAM, the innovation and training centre of the Dutch motor vehicle sector. As a general motor vehicle business, it does not have access to the training provided by importers. In addition to vocational training courses for car mechanics in the context of the apprenticeship system, INNOVAM also organizes a large number of in-service training courses for all types of jobs in the motor vehicle sector: courses for people establishing a business, management courses, technical courses, commercial courses and courses on specific subjects, such as, for example, APK [MOT] inspections and industrial environmental management. The courses are given annually on several different dates. New courses and the dates of courses are published for the sector in good time in the trade journals and targeted mail shots. Employees in motor vehicle businesses are free to sign up for and participate in these courses on the dates which suit them best. Most of the courses are kept short, lasting one or at most two days to prevent employees from being absent from the business for too long. The vocational training courses of the apprenticeship system conclude with a national examination which awards the apprentice a nationally recognized diploma. Most in-service training courses lead to a certificate. These certificates are also generally recognized in the sector. The courses put on by INNOVAM are covered by the sector's system of day release for training, which means that for these courses the employer can receive a subsidy from the sector's training fund of one day's production loss per employee per year. For further background

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information about INNOVAM, reference is made to the sector study.

Recently INNOVAM developed a provision for in-service training in the field of electronics for general motor vehicle businesses. This was a Basic Course in Applied Electronics (BTE), consisting of three short courses at three levels, which teach experienced mechanics the basic principles of modern car electronics in a short time. This provision was specially developed to do something about the gaps in knowledge in this field amongst many older mechanics in general motor vehicle businesses. With these BTE courses they can at least master the basic principles. For mechanics who wish to go further with regard to electrical and electronic technology, there are some specialized and longer courses in this field. In addition, a number of short courses have been developed on special subjects such as electronic ignition systems, brake systems etc. Most of the electronics courses included in in-service training are also included as standard courses in the current vocational training programmes for second and/or chief mechanic. Thus younger or apprenticed mechanics receive training in this field from the very beginning. INNOVAM consciously chose to integrate the electronics courses in the regular vocational training for mechanics. It is felt that electronics should not become a specialist area in the motor vehicle business. Work on electronics should (continue to) form an integral part of the range of tasks carried out by a car specialist with a broad range of qualifications.

3.3 Structure of the public centre

INNOVAM's training centre is located in the extreme mid-west of the Netherlands, and this is a problem for many motor vehicle businesses because of the geographical distance involved (lengthy travelling time, problems with traffic jams, etc.). INNOVAM is trying to deal with these objections by means of co-operation with the regular system of vocational education. Wherever possible, schools in the area which are much closer to the businesses are contracted to run the training and courses. In many cases these are secondary or further technical schools which also have their own programmes for motor vehicle technology and have good practical facilities and specialist teachers, but the courses are also contracted out to district schools for day-release vocational education (SBBO schools). For the apprentices in a particular area, these schools run the theoretical programme of the various vocational training courses of the apprenticeship system, including the vocational training for car mechanic. In-service training courses are run by these schools for INNOVAM on a contractual basis. By contracting out courses using this national network of local educational establishments, INNOVAM has considerably improved the accessibility to training provisions. The business that was studied also made use of this possibility of local training.

4. The firm's training policy

4.1 Training plans and concepts at the repair shop level

It will be clear that as a small business, it does not have detailed policy plans, aims, regulations, procedures and facilities as regards training. There is no separate training budget. The participation in courses or training is a matter which is arranged directly in consultation between the employer and the employees on the basis of a specific need or a specific request on the part of an employee. When such a need or request arises, the employer and employee discuss what sort of course is suitable, where it can be followed, and what organizational and financial arrangements must be made. As stated above, the provisions of INNOVAM are usually looked at first and information is sent regularly about these courses in mail shots. The owner says that he does not wish to oblige his employees to follow certain courses, but does wish to stimulate and facilitate the participation in in-service training as much as possible. Employees are virtually always completely reimbursed for the costs of in-service training courses, and are given sufficient time off to study and for tests and exams.

The fact that there are no specific plans does not mean that there is no "overall concept" behind the activities which take place in the business. Such a concept does exist, but it is in the owner's head. In this, there are two central features:

- an increase in the level of qualifications by giving newcomers the possibility to train to an adequate level of expertise in the motor vehicle sector through vocational training;

- an expansion in the qualification potential by stimulating permanent, experienced employees to follow in-service training courses in the latest technology; this is mainly achieved by means of the in-service training courses in electrics and electronics.

The owner himself states that, partly on account of his age, he does not feel any need for special in-service training for himself in car technology, ("It's more for younger people"). Nor does he see any need for it. If one of the employees is trained in electronics, this is adequate for the business, considering the work available, "and fortunately that's how it is in our case".

4.2 Interlinkage of training concepts and demand

Although no systematic inventories of requirements are drawn up in the business – this is not necessary because the owner is directly aware of any gaps in knowledge, and employees can directly inform

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him of their training requirements – the need for training is closely related to current developments confronting the business. This applies particularly to the technical in-service training courses. Although not much work has been done in electronics up to now, the owner has for some time recognized the need to have some "in-house" knowledge in this field, and in the past he also encouraged various employees to follow in-service training courses in electronics: "You can see it coming, and obviously you have to do something about it. Admittedly we have many older cars, but even cars which are 4–5 years old have quite a few electronic systems. You hope to keep abreast of things as much as possible by means of training." The mechanics have also recognized this need for in-service training and have also taken steps on their own initiative to acquire a greater understanding of modern electronics, either officially or unofficially. There is not so much a need for specialist knowledge in this field, for this is not necessary, but it is felt that a basic level of knowledge is important. The owner says: "Electronics has clearly expanded the field of knowledge. Nowadays mechanics have to know much more than they used to. I think it is particularly important that they really know what they can do as well as what they can't do, that they know what they can do without breaking things. For example, how do you find an electrical current? You don't simply grab hold of a wire or start drilling somewhere. First you see where the wires go, and so on. This requires a certain basic knowledge and experience." There is no need for specialist knowledge. As stated above, when there are more difficult electronic repairs, these are contracted out to specialist firms in the area.

4.3 Training activities

Many of the in-service training activities undertaken by the business in the last few years have taken place in the context of an acquisition of knowledge in the latest motor vehicle technology. To some extent this knowledge is acquired through the vocational training for car mechanics currently followed by the two apprentices. This training comprises a number of standard INNOVAM courses in the field of electronics. In addition, some mechanics have followed specific in-service training courses.

The in-service training of the mechanic who left to go to another employer in 1991 was very important for the business. This was an experienced employee who had been employed for almost 15 years, and had a strong personal interest in electronics. In 1988 he started an in-service training course for chief motor vehicle electrician, a two-year INNOVAM course which also is offered as part of the apprenticeship system. For this course he went to the district school two evenings a week. The course was completely paid for by the business. However, shortly after the end of the course, he left his job, partly because he was insufficiently able to use his new knowledge and skills in his work. Obviously the owner felt this to be a considerable loss, particularly as he himself had greatly encouraged the employee concerned: "That boy was the real technician in the business. He was clearly interested in it: We expected that there would be an increase in the work on electronics, and we should know what we're talking about, so I thought I should let one of my people do it. It was a very broad course, perhaps slightly too broad for our business. There isn't enough real electronics work, and with all his knowledge, the boy was often doing ordinary services. He left to go to a VW business which does more in that field. We did lose quite a bit of investment in know-how."

Once again the business faced a gap in expertise. However, this time the owner took a more cautious approach: "The lesson I learned is that you have to look more closely at what suits your business in terms of training, and the motor vehicle electrician course is out of proportion to the work available in our business. Meanwhile INNOVAM had developed the BTE courses. These were shorter, less specialized courses which we opted for." The present chief mechanic did two BTE courses in 1990: BTE-O, which is an introduction to the basic principles of electro-technology and faults detection, and BTE-1, an introduction to the principles of electronics. Each course lasted a total of 5 afternoons and 10 evenings. The costs of the course were paid by the employer. The free afternoons were divided: half were paid, and the other half were taken out of the mechanic's holidays. The courses consisted of a combination of theory lessons and practical assignments in which electrical and electronic components were built up or repaired in groups. The BTE-1 course concluded with a final test and a certificate. According to the mechanic, the course was relevant to the business, and was worth it: "You can use what you learned straightaway at work, and some things seemed a lot easier. The advantage of the course is also that you learn to use a (multi) meter better. This is not so easy in the repair shop." The employee was asked to do a second follow-up course, the BTE-2, but he turned it down because the course was run only in the evenings in a place rather further away. This would have involved too much travelling time and would have taken up too much of his free time, and the owner understood this objection: "We'll just wait until this course is run somewhere nearer home."

Since 1987, the firm has been involved in other training apart from in-service training in electrics and electronics. In 1991, the chief mechanic followed an APK inspection course, a two-day course run by INNOVAM, which leads to a diploma entitling the employee to carry out APK

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tests on cars. The owner himself has this diploma, but in practice he rarely carries out the tests himself. With the APK diploma, the chief mechanic can now carry out these tests completely on his own. The owner and the chief mechanic also regularly do a one-day APK application course with INNOVAM, where they are kept up to date with the latest test regulations. Last year the owner and the chief mechanic also attended a short course run by INNOVAM on environmental problems in connection with APK tests.

In 1989, the owner and his wife attended a three-day course to learn to use the new computer system in the office. The course was given on location by the supplier, and was specifically aimed at the system concerned. At the end of the course, the instructor was consulted twice for support in the business itself.

4.4 Costs of continuing vocational training

The costs of external training and in-service training are not budgeted for in advance, though obviously they are included in the administration. The owner is well aware of these costs. No explicit cost/benefit analyses are drawn up. The costs incurred up to now are considered justified, although the benefit of the investment in the ex-employee was felt for only a very short time.

The following survey of costs for in-service training since 1987 was provided on request:

- the costs of the motor vehicle electrician training for the ex-employee amounted to NLG 4,000–5,000, including the costs of the course and the working hours lost;
- the costs of the shorter BTE courses amounted to a total of NLG 2,000–3,000, including lost production hours;
- the APK training and application courses cost approximately NLG 1,500 in total;
- there were no costs involved in the computer course for the owner and his wife; the costs were included in the purchase price of the new system; in this case, the costs of non-productive hours are not applicable as neither the owner nor his wife are salaried.

In total since 1987, NLG 7,500–9,500 has been spent on in-service training. This does not take into account the costs incurred in connection with the vocational training of the two apprentices.

On the basis of the day-release arrangement for training, concluded under the Collective Labour Agreement for the sector, the business can claim as many paid days of day release for training as there are employees every year; i.e., in this case, two. These two days are reimbursed by the sector's training fund. It is clear that in recent years the business training effort has exceeded this norm.

5. Evaluation of the training concepts

5.1 Evaluation of the training activities

All in all, it may be said that the business is reasonably successful in keeping up with current technological developments and keeping a balance between its personnel's qualifications and the work requirements. It is clear that a lack of training is unsatisfactory, but that a "surfeit" of training is not so good either (viz., the departure of the over-qualified employee). The owner himself seems reasonably satisfied with the current in-service training provisions in the business: "Obviously there could always be more, but as the owner, I am dependent on my employees and what they want. Up to now, they have been quite willing to follow in-service training. And the apprentices are undergoing vocational training at the moment – that's one day a week as it is – they can't do all sorts of other courses." The need for in-service training is expected to continue in the future, which means that the apprentices will actually have to go on doing courses as soon as they finish their vocational training. Certainly the employer will encourage them to do so: "We put pressure on those boys when they have finished their training. We'll certainly encourage them to continue their training. Follow-up courses are paid, they're given study leave, etc. On the other hand, we'll also ask for results ... otherwise, we could, for example, reimburse only part of the costs."

5.2 Good practice versus normal practice

When he was asked, the owner said that he found it difficult to assess whether or not his business was a leader in training, but one does get the idea that he puts more into training than other general motor vehicle businesses: "In many general businesses, training is considered to be a minor item, and that certainly doesn't apply to us." The business clearly recognizes the need for in-service training, as do the employees. In-service training is specifically encouraged, the employer does not stint on facilities, the employees themselves are prepared to invest in in-service training, and the business offers good opportunities for learning new things on the job in the repair shop.

5.3 Future demand for continuing vocational training

The owner has apparently modified his initial ideas on in-service training from "thorough in-service training in electronics" to a more limited idea of "in-service training in the basic principles", following the experience with his ex-mechanic. This is more suitable in view of the present limited amount of electronic work which comes into the repair shop. The business's needs

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are adequately met by the provision of basic courses currently available by INNOVAM, and it is estimated that this provision will continue to be sufficient for the next few years: "INNOVAM's provisions satisfactorily meet the training needs of a general motor vehicle business like ours." The owner sees no need to add to these provisions, either in terms of content or methodology.

However, the follow-up to training in the business is a problem. In particular, there are problems with the application of newly acquired knowledge and skills in electronics because there is still too little work involving electronics. Therefore the mechanics do not have enough opportunity to gain practical experience of what they learned on the course. However, it is expected that this problem will be partly resolved in the next few years, as newer types of cars containing more electronics come into the repair shop ("also other makes which break down more often"). However, for the time being, this remains a problem area.

6. Conclusions in relation to good practice and normal practice

This case study describes the training practice in a small general motor vehicle business which serves as a model for the situation in this branch of industry in two ways. Many of the developments and problems which were described are typical of what happens in smaller motor vehicle businesses which operate independently of a particular make and wish to continue operating independently. On the other hand, it also serves as a model for other general motor vehicle businesses. The case study shows that these businesses still have good prospects in the motor vehicle sector, despite the rapid technological developments and increasing competition from dealer businesses. In making use of these opportunities, it was shown that in-service training played an important role, though it is not the only key to success. A keen business sense and good and trusting relationships with customers and fellow entrepreneurs are clearly important preconditions.

3. A MEDIUM-SIZED FORD DEALER

1. General introduction

This third case study looks at the training practice of a Ford main dealer company. This company employs about 30 people. Examining training policy and training practice for all the employees or all the departments would have taken up too much of the company's time, and therefore it was agreed with the company to focus this case study on the repair shop. In the past few years, training activities have been aimed particularly at this department.

For the in-service training of its personnel, this dealer business is involved with several other organizations, in particular, with:

- Ford Nederland BV, the importer's organization, which is responsible for the provision of in-service training for Ford. This organization provides not only courses, but also all sorts of instruction material, such as manuals, service documents etc. which are made available to the dealer businesses.

- INNOVAM, the national vocational training institute for the motor vehicle sector. The dealer business in this study has a variety of links with INNOVAM:

- There are contacts with INNOVAM in connection with the vocational training followed by some of the employees as part of their apprenticeship.

- In addition, the dealer business in this study makes use of INNOVAM's own in-service training provision.

- Furthermore, Ford Nederland BV has subcontracted its technical in-service training courses to INNOVAM.

- Finally, the organization and execution of so-called in-dealer training courses are now also carried out by INNOVAM.

- The sector study states that nowadays INNOVAM's main function is the preparation and execution of policy. This means, amongst other things, that the institute has above all a co-ordinating task in the training programmes, and often contracts out these programmes to other institutes. For this reason, the dealer business in the study also has links with various schools/vocational training institutes which it uses for in-service training. These include, in particular, a regional practical centre (RPC) and a district school for in-service vocational training (BBO), where, for example, the theoretical component of the training courses is taught as part of the apprenticeship system. In addition, the Pedagogisch Technische Hogeschool (Technical Teacher Training College – PTH) has an important role to play. Until recently planning, organizing and carrying-out in-dealer training was one of the contract activities provided by this school. The PTH provides full-time training for teachers in technical subjects at LBO (lower vocational) and MBO (intermediate vocational) schools, including motor vehicle technology. As a subcontractor, the PTH runs courses for INNOVAM, including in-dealer training courses.

In addition, the company in this study also has contacts with other training institutes. However, these contacts are either unrelated to the in-service training of the repair shop personnel, the category on which this case study is focused, or they are non-recurrent contacts relating to very specific training requirements.

2. General description of the company

2.1 Type of business

The dealer business in this study is one of Ford's approximately 135 official main dealers in the Netherlands.

The company sells Ford cars and light vans. For this purpose it has a showroom where both new and second-hand Fords are displayed.

In addition, the company does maintenance and repair work on a variety of Ford vehicles. The company carries out virtually all the repair work itself, and only a limited number of jobs are subcontracted. These are specialist activities, such as reboring cylinders, regrinding crankshafts, and repairing cylinder heads, which require fairly large investments in equipment and/or which occur fairly rarely, so that the personnel gets insufficient routine/practical experience of these tasks. The maintenance and repairs largely take place in the company's repair shop. This repair shop has seven inspection ramps. For bodywork maintenance and spraying, the company has a sub-branch elsewhere in the city.

In addition, the company has a parts department. This facility is also used by some of the Ford service dealers in the area.

All the most important categories of the company's turnover are mentioned above. In addition, there are a number of other sources of income, such as the sale of motor vehicle accessories and petrol. These activities are confined to the main facility.

The company is situated on the edge of a medium-sized city (population approx. 150,000) in the east of the Netherlands. Other motor vehicle businesses are also located in the vicinity.

The company employs approximately 30 persons, 27 of whom work in the main facility.

2.

2.2 Development of the company

The company was established about 60 years ago. During the early years, the Model-T Fords were still imported in crates and assembled on the business premises.

The company was taken over by the present director in 1965. At that time it employed about 90 employees distributed over a number of facilities in and around the city. Most of these were petrol stations with small repair shops employing 2–5 people. In addition to cars, the company also sold and repaired Ford trucks.

Since 1965, the company has shrunk considerably. At the moment it still employs about 30 people. This number has been fairly stable for several years. There are several reasons for this fairly marked reduction in size.

- Over the years the petrol stations closed down. Petrol is now sold only at the main facility.

- The truck department has disappeared. In the early 1970s this category still accounted for approximately one-third of the turnover. In fact, the truck department was very important for the company during the years of the oil crisis, as there were restrictions imposed on driving cars during that period. The turnover was virtually completely lost when clients, i.e., transport companies, changed to other more competitive makes of trucks. Nowadays, the trucks account for less than one per cent of the turnover.

- The sale of new cars has fallen significantly, particularly in recent years. Annual sales have fallen from approximately 500 to 300, with the result that the repair shop has become more important for the business turnover. The reduction in the company's car sales is largely due to the fact that Ford has lost a share of the market to competitors. This is attributable both to the rather problematic character of some models and to the fact that important Ford models such as the Sierra are currently being phased out. However, the consumer too plays a role in the declining turnover in new cars. In the past, many clients bought a new car every two years; nowadays the trend is towards acquiring a new car every four years. This trend is further increased for Ford drivers by the fact that Ford is launching a new model on the market: the Mondeo. High expectations have been placed on this new Ford model, which is fitted with a four cylinder Zeta engine. According to insiders, this will help Ford recover its market position which Ford had lost to Japanese car manufacturers. On account of confusion over environmental requirements, Ford assumed for (too long) a time that there was a future for an engine which runs on a lean mixture. This engine needed only an unregulated oxidation catalytic convertor to comply with the environmental requirements, and in addition, it was economical. However, things took a different course. It was many years before Ford responded appropriately to technological developments and environmental requirements. All that ended in 1992. The expectation is that with the new Zeta four cylinder engine, Ford is once again prepared to enter into the competitive arena with the most modern technology. In engine efficiency, the Mondeo is also expected to measure up to the competition. Finally, Ford has made a start on chassis innovation in the Mondeo by fitting the four shock absorbers with electronically operated magnetic valves, so that the system adapts constantly to driving conditions and driving behaviour.

- At the moment, 10–15 per cent of the repair shop turnover still comes from the sale of new cars. Previously this percentage was higher. Another change in the repair shop is that hardly any trucks come in for maintenance/repairs any more. Moreover, there has also been a change in the maintenance of cars. The new models are actually less demanding as regards maintenance, and electronics are starting to play a larger role in this. At the moment the ratio of work in the repair shop involving mechanical and electronic tasks is approximately 80:20, but the proportion of electronics work is rising in relation to the mechanical work. In fact, the amount of work is not only declining because the new models require less maintenance (product technology), but also as a result of developments in repair shop technology. For example, at Ford the introduction of the new Mondeo model is accompanied by a new generation of diagnostic equipment. A single piece of equipment is now used for measuring and storing service data: the Ford Diagnostic System 2000. This means that all the information on all the electronic systems is now stored on a CD and read by means of a CD ROM. The great advantage of this system is that the service data are – and continue to be – readily available and accurate. The FDS 2000 takes only a fraction of the time needed for reading out error codes using the STAR tester and a BOB tester. The more "traditional" testing equipment is also available in the company, alongside the latest diagnostic equipment (the FDS 2000).

As stated above, the repair shop has become more important in relative terms for total business turnover. There is a problem with regard to warranty work. At the moment, this constitutes almost one-third of all the work in the repair shop. For this work, the Ford organization reimburses only the costs actually incurred. No profit is made on this work.

Despite the problems which have arisen in the past few years, the company is still succeeding in making a modest profit. This is quite an achievement in itself, as the company claims that many Ford dealers are in debt.

Some of the trends outlined above will continue to affect the company's turnover in the new few years. For example, the amount of work in the company is expected to decrease by a further 15 per cent as a result of cars requiring even less maintenance. The company hopes that it will be possible to reverse the trend in falling car sales and, as stated above, there are high expectations of the new Ford model, the Mondeo.

There is an awareness that it will be important to act in order to maintain turnover at least at the current level, and if possible, to increase it. For this reason the company is actively searching for new clients, including clients with large fleets of cars, such as leasing companies. In the current competitive climate, a client-oriented approach is becoming increasingly important. This applies to both large and small clients. For large clients – not only leasing companies, but also insurance companies – it is very important that the company has a recognized standard of quality. This is why the company is in the process of obtaining ISO-9002 recognition. The company personnel are discussing how this should be achieved, and one of the employees has been appointed quality controller. The starting point is that responsibility should start at the lowest level of the organization – everyone is individually responsible for the car which he or she has worked on – and that the personnel must be qualified or obtain qualifications in order to achieve this.

2.3 Structure of the company

The company has the legal status of a private company (besloten vennootschap), with the present director as the main shareholder. He spends most of his time on policy and financial/administrative matters. He is supported in this by an "office" department, consisting of one chief administrator, one administrator and two administrative assistants.

A business manager, reporting to the director, is responsible for the "repair shop", "sales", "warehouse" and "bodywork" departments. Each of these departments consists of a manager and one or more employees. The number of employees in these departments is nine, four, three and two respectively. In addition, there are two employees responsible for the petrol station, and also two people who work in reception.

The repair shop is obviously the largest department. In addition to the manager, there are four chief mechanics, two second mechanics, two apprentice mechanics, and one person for a variety of support activities.

The clients present themselves at reception, either by telephone or in person. The reception is centrally situated in the premises, with direct access to the sales, stores and repair shop departments. The receptionist is an employee who has been working for the business for more than 25 years. Before taking up this post, he worked as a mechanic for many years.

He has the knowledge and experience to assess what is involved, both in terms of time and content in the customer's requests. If necessary, he calls on the assistance of the repair shop manager or one of the mechanics for a better assessment of the nature of the problems, or in the case of small problems, so that they can be remedied immediately. The receptionist has a planning schedule on which he can plan the supply of work for each mechanic on a daily basis. For the provisional planning of tasks, the receptionist takes the individual mechanics' knowledge and skills into account as far as possible. However, the definitive assignment of tasks takes place at the start of each working day, usually after consultation between the business manager and the repair shop manager, who generally arrive at the company before the others.

Towards the end of the working day, the outstanding work may be redistributed so that all the tasks planned for that day are finished in time. The planning and, where this is necessary, the redistribution of tasks hardly ever give rise to any problems. The reason is that although there is some specialization amongst the mechanics, this has deliberately not been carried too far. Of the 6 permanent mechanics, 4 can be used on a very broad range of tasks. They are able to deal with all the problems which arise, including those in electronics. The other 2 mechanics are assigned particularly to mechanical tasks. One of the permanent mechanics is a woman. There are physical limitations on the tasks which can be assigned to her. One of the other permanent mechanics is an immigrant. He cannot always be assigned to all the work that comes in, particularly because of his incomplete knowledge of the Dutch language. The fact that every mechanic cannot always be assigned to every task occasionally leads to minor friction in the group. However, the management feels that the present constellation of permanent mechanics offers sufficient quality and flexibility to cope with the work coming in without any problems.

As mentioned above, the company deliberately does not pursue a far-reaching degree of specialization amongst the mechanics. One reason for this is that it reduces the flexibility of the repair shop. Another reason, which is at least as important, is that there are reservations about the reverse side of the specialization of employees, viz., the company's dependence on individual mechanics. In the case of very far-reaching

specialization, this often leads to acute problems when mechanics leave. In addition, mechanics in this situation are in a position of power, which they can exploit at any time.

2.4 Characteristics of the human resources

During the years 1965–1992, the number of employees working in this company fell from 90 to 30. The reasons for this have been examined above. In recent years the number of personnel has been fairly stable and the company expects that this will continue to be the case for some time to come.

Of the 30 employees, eight are under 35 years old. Slightly more than half are between 35 and 50. Those who are over 50 are, above all, in management (director, business manager, repair shop manager, head of administration).

More than half of the employees have been working for the company for over 10 years. In the repair shop, there is roughly an equal number of employees who have worked there for only a short time (less than 5 years) and of those who have worked there for over 20 years.

With one exception, a mechanic of Indonesian origin, who has been working in the company for approximately 7 years, everyone in the company has Dutch nationality. Of the 30 people working in the company, 5 are women. 4 have an administrative function, and the fifth woman has been employed as a mechanic for about 2 years.

Everyone is employed full-time. "Full-time" means 38 hours per week. The company works 6 days a week. From Monday to Friday, it is open from 8.00 in the morning to 17.45. On these days there are two breaks, from 10 – 10.15, and from 12.30 – 13.00. On Saturday, the company is open from 8.00 in the morning until noon. Thus the company is open about 50 hours per week. Every employee has one weekday (Monday to Friday) free.

Holiday provisions are covered by the Collective Labour Agreement (CLA). Usually this amounts to 24 days per year, but employees over 50 have an extra three days' holiday.

The salaries are also set by the CAO. There is a basic salary which may be increased by supplementary payments, for example, for diplomas which have been gained.

In our discussions within the company, attention focused on job requirements and the way in which these affect company recruitment and training policy. The findings are incorporated in section 3.0.

3. Those involved in the in-service training network

The remainder of this Ford dealer report focuses on the in-service training, policy and practice since 1987. However, for a proper understanding of this fairly recent period, it is necessary to begin by looking slightly further back.

3.1 From training strategy to continuing training strategy via recruitment strategy

Training strategy up to approximately 1970.

Up to about 1970, this dealer business had its own school, where 4 or 5 apprentices were always being trained as car mechanics by an in-company instructor. This school was situated in the repair shop around one of the inspection ramps. This strategy permitted the company to meet its need for new personnel with specifically trained employees, in terms of both technical, and social

Table 1 – Number of employees by department, age and years of service (as of 31-12-1992)

	Repair shop	Reception	Sales	Spare parts	Office mgmt	Bodywork	Petrol station	Total
Age								
< 35 yrs	2	1	3	1	1			8
35 – 50 yrs	6	1	2	3	2	2	1	17
> 50 yrs	1				1		1	3
Total	9	2	5	4	4	2	2	30
Years of service								
< 5 years	3		3	1			1	8
6 – 10 years	1	1		1	1			5
11 – 20 years	1		2	1	3			8
> 20 years	4	1		1		2	1	9
Total	9	2	5	4	4	2	2	30

skills. At that time, it was mainly a matter of training apprentices to become qualified mechanics. After this, training or in-service training no longer played a major role.

Transition to recruitment strategy after 1970.
It was mentioned above that the number of personnel in the company has fallen dramatically since the mid-1960s. This has meant a sharp decline in the need for new personnel, so that the training strategy in the company's own school which had been used up to that time actually became a rather expensive investment. When the company's instructor left, the school was run by one of the other employees for a while, on a smaller scale. When this employee was promoted to the position of receptionist, this meant the end of the school.

In so far as new employees are still needed, they are now recruited from the labour market.

The transition from the training strategy to the recruitment strategy did not give rise to any real problems for the company. Not only was there a fairly small demand for new personnel, but in addition, the requirements for any newcomers were at a fairly low level for a long time – certainly in comparison with the present situation. For a long time, the most important requirement was that the employee was prepared to work. It was a matter of attracting people "who were happy to get their hands dirty and liked mechanical tasks". There was no strict need for a mechanic's diploma, and certainly not for a chief mechanic's diploma.

The importer also points to the fact that from the 1970s to the mid-1980s, there were no great changes in the mechanics' work. "The really good mechanics left the sector. This was not a problem at the time, because they were actually too expensive for the work in dealer businesses ... Moreover, they were usually in small businesses with very limited career prospects ... They could earn more elsewhere."

The in-service training provided by the importer at that time was particularly concerned with new models and a few component courses. The dealer businesses could enrol their employees for these courses which were announced by general mailings from Ford-Nederland to all 135 dealer businesses. The only criterion for registration was that the person doing the course was employed in one of the dealer businesses. This meant that the people on the courses often had very divergent levels of skill and knowledge. This was not to the advantage of the quality of the courses. Not everyone found this a problem. Going on a course often also had a greater or lesser social and recreational aspect. No diplomas or certificates were awarded. At the time, the importer was still responsible himself for the organization and execution of the course. In most cases, no more than one trainer was needed for this. This applied to both technical and commercial training courses.

At the end of the 1980s: the need for a continuing vocational training strategy.
However, at the end of the 1980s, things were changing rapidly in the dealer businesses, especially as a result of the above-mentioned changes in product and repair shop technology. A knowledge of electronics has now become an important requirement for mechanics: "Now, they first have to think, measure and analyze, and they certainly should not get down to the mechanical work straightaway." This implies that a different attitude is needed to the work. In the dealer business which was studied, a professional diploma is now a requirement, and this must be at least a mechanic's diploma. A mere certificate of attendance from secondary vocational training college is no longer sufficient. In addition, a different and more client-oriented approach is needed. This involves not only a polite attitude to the client, but also a client-oriented way of working even when the client is not present. "The mechanics must do their work well, they don't have to tell the client, but the client should notice it." Obviously, faults and other problems with the car have to be remedied adequately and satisfactorily, but there is more. "The car should also be delivered back in a client-friendly condition ... neatly, and with the seats and mirrors back in the client's own position ... that sort of thing."

The dealer business mentioned that at the moment the labour market is larger than it has been for several years. However, this only partly solves the problems which have arisen, i.e. the discrepancies between the required qualifications and those which are available. In the repair shop, there have been very few vacancies in the past few years. In these cases the company did succeed in recruiting mechanics who met the increased requirements.

For example, a few years ago an employee was taken on who was already following the training for chief mechanic. However, it remains a problem that the new requirements, such as those in electronics, are still insufficiently incorporated in the training programmes of regular vocational education. This means that school-leavers are entering the labour market with insufficient qualifications in this field. Finally, there are quite a lot of employees with long years of service working in the repair shop, who still have to gain the qualifications for the new requirements, and therefore need in-service training.

As stated above, the discrepancy between the qualifications available and those required arose particularly in the second half of the 1980s. Particularly in the years 1987–1988, there arose an increasing awareness of this discrepancy, and of the need to take action.

According to representatives of both INNOVAM and Ford Nederland, this situation is certainly not unique for the dealer business studied here. They believe that all motor vehicle businesses, including those of other makes of cars even outside the Netherlands, have been confronted with this problem in the course of the last decade.

3.2 The training structure within the company

As stated above, the company's own school disappeared quite some time ago. However, this does not mean that nothing is done nowadays for in-service training. In fact, there are several different kinds of in-service training available to the repair shop employees. The responsibility lies with the repair shop manager and the business manager.

Training courses in the context of the apprenticeship system.
The company is recognized by INNOVAM as an apprenticeship company, which entitles it to conclude an apprenticeship employment agreement with (new) employees for vocational training within the framework of the apprenticeship system, so that the company itself is responsible for the practical part of the training. The repair shop manager is qualified to instruct and supervise apprentices.

On-the-job training.
In fact, this supervision is not restricted to the people who are being trained under the apprenticeship system. At present, more or less continuous on-the-job in-service training is available to everyone in the repair shop. When the employees come across problems that they are unable to deal with, there are different ways of tackling these. The repair shop manager, or one of his other colleagues, can explain the problem to the employee concerned, and teach him to deal with it, and/or the employee can study the instruction material available in the repair shop, which may be referred to by the manager or a colleague. This is the instruction material made available by Ford Nederland BV in the form of manuals and technical service documents. They are stored in an easily accessible way in two cupboards in the repair shop, and are available at any time to all employees.

Off-the-job training.
However, in the period since 1987, the above-mentioned on-the-job in-service training opportunities have obviously been inadequate to achieve and maintain a good balance between the qualifications available and those required. Off-the-job in-service training is also provided, particularly in the form of training courses.

To a large extent, these are courses made available by Ford Nederland BV, held outside the company. The courses are run during working hours. Employees are paid for the time they are on the course, and their expenses are also reimbursed. In addition, they also follow other training courses, particularly courses provided by INNOVAM itself. For these courses, the dealer business makes the same facilities available as it does for the specific Ford in-service training courses. The repair shop manager and the business manager consult to decide who is eligible for the various courses. Depending on the course, this can vary from almost everyone to just one employee.

In addition, another form of training also takes place off the job, though in the company itself. It consists of 10 sessions a year, held once a month. The training starts at the end of the working day, and lasts to approximately 10 o'clock in the evening. The time spent on the course is unpaid, but the company does pay for all the other expenses (materials, costs of the course, catering etc.). This in-dealer training is open to all the main dealer's repair shop employees and to the repair shop technicians of some of the sub-dealers in the same area. This means that approximately 15 people attend the course, a group size for which the training can still be very effective, while the costs are relatively low per person.

Half of the ten training sessions are provided by an external trainer. The other sessions are preparatory and are run by the repair shop manager.

Finally, there is also off-the-job in-service training which is not given as a course. A good example of this in the dealer business under review is the magazine "Autoteam, the magazine for the Ford dealer service team". The dealer businesses can subscribe to this quarterly magazine, which contains information on all sorts of new developments in Ford models and their components, as well as on new developments in repair shop technology.

For the last 3 years there has been an "Autoteam competition". Depending on the content of the magazine, each issue contains a number of questions, subdivided into the following subjects: the general section (to be answered by all participants), a repair shop section (for the mechanics), a bodywork and spray section (for bodyworkers and sprayers) and a reception section (for receptionists). By giving quarterly and annual prizes for this competition, Ford Nederland BV tries to stimulate the different categories of employees in the dealer businesses to become thoroughly acquainted with relevant information.

3.3 The training structure of Ford Nederland BV's

The responsibility for in-service training lies with the dealer businesses.
The Ford organization has traditionally given priority to independent entrepreneurship in the

dealer businesses. Staff policy is viewed as a matter for the dealer businesses themselves. No agreements about the (in-service) training of the personnel are incorporated in the contract between Ford Nederland BV and the dealer business (which was studied here).

There is a trend towards less informality.
This section has already referred to the rather limited provision of courses, as well as the limited capacity for technical training courses (usually with one trainer) at Ford Nederland BV during the second half of the 1980s.

It became clear to Ford Nederland BV at that time, that more needed to be done with regard to the in-service training of repair shop employees, both in a qualitative and a quantitative sense, particularly because the dealer businesses were increasingly voicing their dissatisfaction vis-a-vis the importer's organization. Ford Nederland BV acted on this. However, according to a number of dealer businesses, including the one which is the subject of this study, action was not taken quickly enough. (For this reason they took initiatives themselves including the in-dealer training course.)

However, not all the dealer businesses are equally aware of, or convinced of the need for in-service training for their employees. As soon as low in-service training efforts are noted concurrently with lower profits, the importer links one to the other in the quarterly reports and/or via the external department, and sends the dealer business concerned a clear message that more attention should be devoted to the in-service training of its employees.

Measurement is knowledge.
Ford Nederland BV is able to adopt this approach because various trends in the dealer businesses are carefully monitored. One of these is the sale of new cars. Another aspect which is carefully recorded is what the customers think of the new cars and of the purchasing process, as well as what they think of the after-sales service of the dealer concerned. Every purchaser receives a fairly detailed evaluation form approximately two months after the purchase. The results of this Client Satisfaction Measurement (CSM) are not only evaluated for every company but are also compared with the average results in the sub-group of dealer businesses of a comparable size. Obviously Ford Nederland BV attaches a great deal of importance to these clients' remarks. They are clearly becoming very important in the present competitive climate in which Ford's market share is obviously under pressure. In fact this also forms the background to Ford Nederland BV's taking on a stimulating and supportive role towards the dealer businesses for the implementation of the ISO-9002 directives and measures. Finally, a precise record is kept of which employees from which dealer businesses participate in which courses. This computerized data file is known as the *Ford Training Passport.*

The in-service training needs are also measured.
In 1991, INNOVAM was commissioned by Ford Nederland's importer to draw up and carry out an enquiry into the training levels and training needs of the repair shop personnel of Ford Nederland's approximately 220 dealer businesses (135 main dealers and 85 service dealers). The dealer businesses were requested, where necessary with the support of INNOVAM'S external service, to fill in for each repair shop employee:

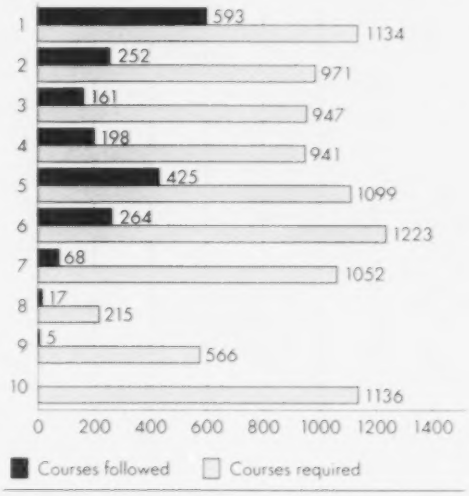
a. What school education/vocational education he had followed.

b. Which were the last 4 Ford courses he had taken.

c. Which in-service training need could be identified for this employee.

In total, this information was obtained for over 1,800 repair shop employees. Table 2 gives the results of this study.

Table 2 – The courses followed by and needed for the repair shop employees of Ford dealer businesses (1991 survey)



1: Special topics
2: Brakes, steering and suspension
3: Manual transmission and final drive
4: Automatic transmission
5: Petrol engines/diesel engines
6: Engine management (petrol/diesel)
7: Electrical systems
8: Body and paint
9: PDI and routine maintenance
10: Client contact, etc.

In fact, the results are a clear illustration of the discrepancies which are found in the dealer businesses between the qualifications which the

repair shop personnel have and the qualifications required for the work.

The in-service training provision consisting of 40 courses.
At the moment, the in-service training provision for the repair shop employees consists of about 40 different courses. A small number of these courses are still being developed. Appendix 1 provides a picture of the 40 Ford in-service training courses for repair shop employees, broken down into 9 different categories in Table 2. In fact, as part of the above-mentioned needs evaluation, each of these 40 courses was assessed to see to what extent there was a need for it in the dealer businesses.

End of 1991: Organization and execution of courses contracted out to INNOVAM.
The great need for in-service training among the repair shop personnel could not by any means be adequately met by Ford Nederland BV's existing training capacity. This was one of the arguments for contracting out the in-service training courses to INNOVAM. The choice of INNOVAM is an obvious one, in view of this institute's central position in the motor vehicle sector in the Netherlands. In addition, one of the advantages of INNOVAM is that it has a number of different training locations, so that the in-service training could take place closer to the dealer businesses. Ford Nederland BV itself has only one trainer and one training location, in Amsterdam.

The powers of decision and policy development remain with Ford itself.
However, the responsibility for in-service training remains in the hands of the Ford organization itself, which determines which courses are placed on the in-service training agenda at which time. Ford also decides on the content of the courses and the development of the course material. The course development in particular is increasingly contracted out to specialists. Ford Nederland BV is usually supplied with ready-made courses by Ford Germany. Ford Nederland BV simply has to ensure that adequate Dutch language versions of these courses are produced. In addition, the in-service training participation of the dealer businesses is analyzed against the background of their sales performance and the client evaluations (Client Satisfaction Measurement). The results can be linked back to the dealer businesses via the external department of Ford Nederland BV and/or via the quarterly reports. The tasks described here, at least in so far as they are carried out at Ford Nederland BV, form part of the package of tasks of the head of technical service and training. This person is also responsible for the organization and administration of the above-mentioned Autoteam competition.

3.4 INNOVAM'S training structure

Section 1 stated that the dealer business studied here has various contacts with INNOVAM for the in-service training of its employees. We will not discuss INNOVAM's role in the apprenticeship system in greater detail here. Adequate information on this can be found in the sectoral report. We will also give only a brief outline of INNOVAM's own in-service training provision. Every six months, the dealer business receives a brochure from INNOVAM containing available in-training service courses. The dealer business also makes use of this provision (also see Section 4). In this sub-section, we will describe in particular the role which INNOVAM plays as the main contractual provider of Ford's in-service training courses.

The advantages of INNOVAM's co-operation with Ford.
Under the terms of an agreement contract signed between Ford Nederland BV and INNOVAM, INNOVAM has contracted to provide Ford Nederland's complete technical in-service training. One of the important advantages of this five-year contract, is that it provides INNOVAM with employment/continuity. However, an equally important advantage for INNOVAM is that it enables it to keep up with the most modern developments, allowing it to continue to stay ahead in training for this sector. It is expected that this co-operation will provide opportunities for quickly incorporating general technological developments, i.e., technological developments which are not related to specific makes of cars, in the training system for the sector – obviously in consultation with Ford, and probably also with other importers in the future.

Regional training centres and 4 permanent Ford trainers.
INNOVAM has 3 training centres for the Ford courses, in Eindhoven (PTH location), Zwolle (RPC location) and Voorschoten. The last of these is in the INNOVAM premises itself. However, the Ford training centres can be clearly identified as such because Ford's blue colour dominates, rather than INNOVAM's yellow.

Currently, INNOVAM employs four trainers who work exclusively full time on the Ford training courses. This means that right now sufficient technical training capacity is available to provide three or four days of in-service training per mechanic per year. Previously approximately one day per year was available. Moreover, these four trainers are trained on courses in Germany, England, or wherever they need to go in order to acquire the requisite know-how. This gives them a genuinely up-to-date knowledge of new developments.

There is also an increase in quality.
Thus the Ford dealer business's capacity for in-service training has significantly increased as a result of its collaboration with INNOVAM. In addition, the quality has also improved in various ways.

- INNOVAM classifies repair shop employees into three levels, the maintenance level, the repair level and the diagnostic level. This classification fits in well with the three levels which are distinguished in the Ford in-service training programme (see Appendix 1). In practice, not everyone can enrol for every course. It is only for the basic courses that there is no entry requirement. In this way the course groups have acquired a much more even character as regards their level of prior knowledge and/or experience.

- Every course day finishes with a test. This means that the people on the course become aware that the course is actually aimed at learning and not, or at least not primarily, at the social and recreational aspects.

- The people on the course who successfully complete the tests receive a certificate. This is aimed in particular at stimulating them to participate in the course in a motivated way.

- Every person on the course is asked to evaluate it at the end by filling in a short questionnaire. This is not a specific feature of Ford courses, but is a general INNOVAM practice. The forms are processed by an independent market research bureau, and the results are reported to Ford Nederland B.V. once a month.

The systematic inventory of in-service training needs.
INNOVAM's external department comprises about 80 consultants who actually put on the complete INNOVAM package. They visit the companies every day to talk about both the apprenticeship courses and about the commercial package. Nowadays, INNOVAM prefers to use the term "training advisor" rather than "consultant". The contract with Ford Nederland B.V. includes the specification that one of the training advisors visit each dealer business every year. At this meeting, both sides systematically review the past year's training activities and examine and define the company's additional in-service training needs.

The current position.
The four trainers started on the Ford in-service training courses in April 1992. In the dealer businesses there appeared to be a very great need for in-service training in electronics (also see Table 2). Knowledge of this is in fact an entry requirement for a large proportion of the Ford in-service training provision (see Appendix 1). This is why two of the four trainers have been exclusively occupied with the Basic Course in Applied Electronics (course 30/11 in Appendix 1) since the beginning (April 1992). This course is actually a combination of the former Ford course in Basic Electronics, and the INNOVAM Basic Course in Applied Electronics. The INNOVAM course consists of three levels. In consultation with Ford Nederland, it was decided to opt for a new course structure consisting of the first two levels, which are well adapted to the Ford situation. This new course lasts 6 days. According to the planning schedule, all the mechanics who have applied will have completed the Basic Course in Applied Electronics by mid-1993. The other 2 trainers have up to now been almost entirely concerned with the courses from the category "Special topics" (see Appendix 1), viz., particularly the courses for new or redesigned models (Scorpio, Mondeo etc.), and the new Zeta engine.

Advantages for employees.
The new form of cooperation is to the advantage of both Ford Nederland B.V. and INNOVAM. The employees from the dealer businesses also benefit. It is clear that there are more in-service training possibilities for them now than there were previously. In addition, their increasing level of qualifications is illustrated by certificates in the Ford Training Passport. Furthermore, it is important that they receive not only the Ford certificate when they successfully conclude the basic course in applied electronics, but also two INNOVAM certificates (for the first two levels of the INNOVAM Applied Electronics course), which are generally recognized in the sector. Moreover, this means that Ford Nederland B.V. is eligible for a financial subsidy for this course from the OOMT (the tasks and position of this body are described in the sectoral report).

4. Training policy and training practice in this company

4.1 The training plan for the repair shop

The dealer business in this study is actually one of the larger businesses in the sector. But nevertheless, with 30 employees, it can be classified as a fairly small company. In general, this sort of company tends to work in a rather informal way. There is very little management, and certainly there are no managers with the specific task of policy development and of formulating policy memoranda.

A carefully considered approach.
However, it was indicated in previous sections that the management of this dealer business is well aware of the importance of having adequately qualified mechanics, and this is certainly part of the business policy, "even though little is put down

on paper in this respect". We will begin with an illustration, and then try to elucidate the essential elements of the in-service training plan adopted in this company.

Normally, a staff meeting is held once a month, attended not only by the director and management. The company has a small company's flexibility to increase the frequency of these meetings whenever this is considered necessary. For example, at the moment, there are meetings every two weeks because the company is working on developing the most appropriate way of applying Client Satisfaction Measurement, for example, on the basis of ISO-9002. Meanwhile, a quality controller has been appointed within the company. In addition, two people, including the quality controller, will follow a new INNOVAM course relating to ISO-9002, so that there will be more expertise in this field available in the company and in the internal dialogue on Client Satisfaction Measurement. The starting point for a satisfactory approach to this is that everyone, from the top to the bottom of the company, is responsible for their own work. However, this implies that everyone must be qualified for this. One of the important points of discussion in the company is what is needed to achieve this.

Section 3.1 described how the developments which have taken place in this dealer business in the past few decades can be characterized as a development from a training strategy to an in-service training strategy, via a recruitment strategy. In the various discussions with the business manager, the repair shop manager and a mechanic, we have tried to outline this in-service training strategy.

The plan is broader than merely catching up on lost ground.
Section 3.1 also described how a number of changes in product and repair shop technology, as well as the changing requirements and wishes of clients with regard to quality and service, have led to a shortage of qualifications in the repair shop personnel, in terms of knowledge, attitude and skills. The company concerned here became aware at an early stage that it was necessary to make up this lost ground. It was one of the first dealer businesses to appeal to the importer to make greater provision for in-service training. As these businesses, which meet fairly regularly at the regional dealer meetings, considered that Ford Nederland BV was not responding quickly or adequately enough, they decided to take the initiative themselves. The in-dealer training developed from this initiative. However, for the company studied here, there are indications that other arguments also played a role in its decision to support this initiative apart from Ford Nederland BV's response (which was considered inadequate).

Ford Nederland's approach is not suitable for everyone.
The in-service training provided by Ford Nederland BV takes place during the day. This implies that the dealer business studied here can, at most, send only one or a few employees to the Ford in-service training courses. Not all the mechanics respond equally well to this system. Some do not feel sufficiently at home in such an "unfamiliar" training situation, and consequently learn very little from the course. "This is certainly the case for courses which include articulate participants from the really large dealer businesses in the big cities. Some of our mechanics don't get a look in at all, and hardly get anything out of the course." This actually implies that not all the mechanics in the company that was studied are equally suitable for the importer's in-service training provision.

Individual in-service training is only one aspect of the desired solution.
The in-service training provision of Ford and other institutes such as INNOVAM are used, but this is by no means all. If these were all that were used, the difference in the levels of qualification of the repair shop personnel would constantly increase. This does not fit in with the way in which the work is organized in this company. The aim is for all the mechanics to be used on a broad range of tasks. Some degree of specialization is not considered a problem, and may even be considered desirable. For example, it is not necessary for all the mechanics to have qualifications in the field of LPG systems, or air-conditioning and/or cooling systems. A knowledge of and skills in these fields is not needed very often, though it may be desirable or even necessary for one of the mechanics to have a diploma in them. Furthermore, it is considered desirable rather than problematic that there be some differences in expertise amongst the mechanics for tasks which occur frequently, as the presence of troubleshooters in the various different areas has clear advantages. Nevertheless, it is assumed that the mechanics should be able to deal with a wide range of tasks. In order to achieve this wide range of skills, in-service training is necessary nowadays. This takes place, and to some extent it can be achieved in the form of individual in-service training, as provided, for example, by Ford Nederland BV and INNOVAM. For every in-service training provision made available to the company, the business manager and the repair shop manager consult to decide whether anyone, and if so, who, will be eligible for the course concerned.

In-service training in a team context is also essential.
One of the reasons that the dealer business studied here started with in-dealer training, and has continued with it, is that in this way, everyone in the repair shop is provided with a certain amount of in-service training, including the people for whom external courses are not a solution. It is

precisely for these people that in-service training is most necessary. Without the in-dealer training, the differences in the mechanics' qualifications would constantly increase and, in the company's view, become unacceptably large. This brings us to another argument put forward by the company. In the organization of the work, the principle of a wide range of skills is adopted, but it is actually impossible to ignore the differences in qualifications which exist. However, as stated in section 2.3, the current team of mechanics should be sufficiently skilled and flexible to cope with the incoming work without any problems. There is a determined intention to maintain this state of affairs. Therefore the mechanics should have – and should continue to have – an awareness of team responsibility, in addition to individual responsibility for their own work. Thus an important element of the in-dealer training is to ensure that the repair shop mechanics continue to work as a team, while their qualifications are changing to a greater or lesser extent at an individual level. Thus, in the in-dealer training courses, it is a question of mechanics learning to accept each other's strong and weak points, as well as learning to interact adequately as a team. The management emphasizes that this sort of thing can be taught better by an external trainer than by the company itself.

4.2 The relationship between the training plan and the training requirements

A combination of 4 elements.

Thus the content and the structure of the in-service training in this company are clearly related to:

1. Changes in product and repair shop technology
2. Changes in the Client Satisfaction Measurement process and the implementation in this context of ISO-9002
3. The principles adopted by the company for the organization of labour
4. The mechanics' individual learning capacities.

With regard to point 3, the company has made a clear choice: it has opted for mechanics who are versatile, and who carry out the work as a team, making adequate use of each other's strong and weak points. These, i.e. the mechanic's qualifications, change to a greater or lesser extent, on the one hand, under the influence of the changes mentioned in points 1 and 2, and on the other hand, as a result of individual learning capacities. The variation which exists in in-service training activities is the result, amongst other things, of the company's attempt to take into account these divergent learning capacities. In addition, it is the result of the company's attempt to balance individual in-service training with working as a team.

The evident need for catching up in the technical field.

Right now no systematic listing exists of the results which the changes in product and repair shop technology (should) have for mechanics. Even without such an inventory, it became quite clear during the second half of the 1980s that there was a growing shortage of qualified mechanics, especially in the field of electronics. Individual and collective warnings were sent to the importer regarding this problem, via the regional dealer meetings. As, according to a number of dealer businesses, Ford Nederland BV did not respond to these warnings quickly enough, they took the initiative themselves. This initiative, which was supported by the importer, both financially and as regards content, resulted in 1990 in in-dealer training courses at approximately 70 dealer businesses, including the company under review. The businesses which took the initiative also made their own clear contribution to the content and structure of the in-dealer training.

By 1992, Ford Nederland BV had subcontracted the execution of technical in-service training to INNOVAM, creating a significantly larger in-service training capacity. The company studied here made full use of the provision developed by the importer. This means that the technical in-service training activities increased considerably in the early 1990s. The company itself sees this as a way of catching up.

At the moment Client Satisfaction Measurement – and in this context, the ISO-9002 – are priority matters. The company is in the process of assessing what this involves with regard to new or additional requirements for personnel, and how these requirements can be met.

4.3 The target group for training

Section 1 of this report stated that this case study focused on the repair shop personnel, inter alia, because in-service training activities have been aimed especially at this group of employees during recent years.

During the 1970s – and to a large extent, even in the 1980s – there was actually no great need for in-service training activities for mechanics. In so far as in-service training was necessary, this was related in particular to the introduction of new models. However, during the second half of the 1980s, product and repair shop technology were changing at an ever-faster rate, especially on account of the increasing application of electronics. Although the need for in-service training had already been very clearly indicated in 1988 and 1989, it was not until 1990 that in-service training activities were actually carried out. The reason for this was that the in-service training capacity for special Ford products and Ford technology was not adequately available.

In principle, all the mechanics can and may follow in-service training courses. However, this does not mean that every mechanic can go on every course. In a number of fields it is enough for the company to have one or a few mechanics who keep up to date by means of in-service training courses. This applies, for example, for in-service training in the field of STEK qualifications (air conditioning and cooling) and the course for detecting defects in LPG systems. Other courses, such as those for the new model, the Mondeo (a two-day course), the course on the new four cylinder Zeta engine (a one-day course) and the Basic Course in Applied Electronics, are open to all mechanics. As a number of courses in the Ford in-service training programme (see Appendix 1) only admit mechanics who have completed the Basic Course in Applied Electronics, the company studied here encourages its mechanics to take this course, even though it lasts no fewer than 6 days. Most of the mechanics are following it at the moment.

The company does not consider that these external courses are a suitable in-service training provision for all mechanics. The company therefore also participates in the in-dealer training courses. In 1990, there were 10 sessions, which each lasted approximately 4 hours. All the repair shop personnel participate in these sessions, even though the meetings virtually always take place in their own time. A new series of in-dealer sessions is starting shortly.

All in all, intensive efforts have been made with regard to the in-service training of mechanics since 1990. For this year it is estimated that the mechanics will spend approximately 10 days on in-service training. The term "catching up" is certainly appropriate.

4.4 The structure and purpose of the training

The aim of catching up by means of in-service training is related particularly to the acquisition of knowledge about the latest motor vehicle technology and the new diagnostic technology. This applies both to external in-service training courses for mechanics and to in-dealer training. In addition, in-dealer training is expressly intended to bring individual qualifications into line with those for the group as a whole, i.e. to enable the mechanics to function as a team.
Table 2 shows that the Ford dealer businesses have also discovered a great need for in-service training courses in client-oriented behaviour directed at mechanics. Up to now, Ford has not provided this sort of course for mechanics. This was a reason for dealers to devote attention to Client Satisfaction Measurement, as well as to technology, in their in-dealer training.
As stated above, this move to catch up by means of in-service training is a fairly recent phenomenon and the objectives have not yet changed much.

This small company has fairly few people in management positions. Therefore, in-service training activities for the mechanics do not usually lead to promotion in the company, although this does happen occasionally. For example, the current receptionist started work in the company as a mechanic. However, it is possible to reach the level of chief mechanic, which commands a higher salary than the level of mechanic, under the terms of the collective labour agreement arrangements (CAO) for the sector.

In principle, newcomers start on the minimum salary. Depending on the mechanic's performance, the company adapts the salary. In this respect, the CAO agreements are sometimes seen rather as a straightjacket. In-service training can remedy the problem to some extent, because the CAO does provide for additional payment for diplomas. A recent example is the increased salary of one of the chief mechanics after he gained the "Chief Motor Vehicle Electrician" diploma (an INNOVAM course which is part of the apprenticeship system, but which can also be followed – as in this case – as an in-service training course).

Section 3.2 described how the in-service training in this company is available in two forms both on and off the job, in addition to the in-service training which is part of the apprenticeship system. It also described the different versions of these types of training which are found in this company.

Appendix 1 contains a survey of the technical in-service training provided by Ford for dealer businesses. This provision consists of approximately 40 courses divided into nine categories (mainly corresponding to the different product lines) and 3 levels (basic, intermediate and advanced).

A similar distinction of (three) levels of (in-service) training is made in the training provision of most manufacturers/importers. Some manufacturers/importers go a long way in prescribing how the mechanics should be classified in these levels in their dealer businesses. However, Ford works on the principle that the dealers are independent entrepreneurs and are responsible for their own business and personnel.

The educational structure of these courses is more or less identical, comprising a theoretical and practical component. Written materials are available for all courses, usually in the form of course books. A number of courses also use videos.

These courses have been organized and run by INNOVAM since 1992. The institute employs four

trainers who work exclusively on providing in-service training courses for Ford.

Up to now, virtually the whole training capacity has been taken up by the Basic Course in Applied Electronics (course 30/11 in Appendix 1), and courses in the "special topics" category. It is expected that, from mid-1993, the four trainers will be able to find time for the other courses in the programme. It is expected that the capacity which will become available will be used initially for follow-up courses with clear electronics elements. These would be in-service training courses on engine management (courses 29/21–23 in Appendix 1) and certain component courses (courses 10/21–23, 17/21 and 17/13 in Appendix 1).

In addition, in-dealer training plays an essential role in the development of qualifications for this Ford (and other) dealer businesses.

In-dealer training started in a limited number of businesses in 1989. In the course of that year, it became clear that there was a great deal of interest in the course on the part of dealers. More than 70 dealer businesses subscribed to the in-dealer training in 1990.

The in-dealer training was specially developed for Ford cars, and is aimed at increasing the understanding of various electronic regulating systems – for example, in the field of motor management – and in this way making sure that defects can be traced more quickly and efficiently.

The in-dealer training was carried out by the PTH. The content of the training was established in consultation with a number of dealer businesses and with Ford Nederland BV. The latter also made a great deal of training materials available. The content of the in-dealer training consists of various elements of Ford's technical in-service training provision (cf. Appendix 1 and Appendix 2). Every training session consists of a theoretical component, followed by a practical session (particularly measurements) with the car.

No in-dealer training was provided in 1992. One of the reasons for this is that during this period Ford Nederland BV was contracting out the organization and execution of the technical in-service training provision to INNOVAM. In addition, Ford Nederland BV considers that there are no real arguments for continuing the in-dealer training because:

- The catching up needed was achieved with the 1990/91 in-dealer training.
- Since 1992, there has been sufficient provision of Ford in-service training courses (see Appendix 1) and a sufficient in-service training capacity (four trainers) to carry out these courses.
- Ford Nederland BV considers that good in-service training requires a great deal of energy on the part of the participants, and for this reason it does not encourage the in-service training taking place outside working hours, i.e., after work.

However, as we have seen, the dealer businesses have other arguments for wanting to continue running this form of in-service training.

Eventually Ford Nederland BV agreed. However, the new in-dealer training has also been contracted out to INNOVAM. This organization has concluded an agreement with the PTH, the educational establishment which organized and carried out the in-dealer training in 1990/1991.

The content of the new in-dealer training was established on the basis of:

- a directive from Ford Nederland BV that there should be no overlapping with the courses which take place in the context of Ford Technical Service Training;
- consultation with the Ford trainers of INNOVAM;
- consultation by INNOVAM with a number of businesses which can be seen as leading the field in this form of in-service training; and
- consultation with the PTH.

This results in an in-dealer training package consisting of 5 courses, viz.

1. ABS, old and new.
2. Reading tables, new.
3. Reading error codes.
4. Diesel (turbo-diesel; catalytic converter diesel).
5. Central injection and DIS ignition.

The in-dealer training will continue to be run by the PTH. The structure is the same as it was in 1990/1991, though the training sessions will now take place once every two months.
More than 30 dealer businesses have applied for this in-dealer training, including the company studied here. The participating businesses can determine themselves whether they wish to carry out the training sessions in working hours or afterwards. The dealer business studied here opted for the latter. In 1990, the costs of the course amounted to approximately 650 guilders per evening. Meanwhile, this cost has doubled, in particular because Ford Nederland BV has significantly reduced its financial contribution.

2.

INNOVAM's four Ford trainers have up to now concentrated particularly on filling the gaps in the knowledge of electronics (course 30/11 in Appendix 1) and on familiarizing the mechanics with new models and their parts. For example, in recent years a great deal of attention has been devoted to the new four cylinder Zeta engine. This course, which focuses on the engine's construction and operation, was followed by most of the mechanics in the dealer business studied here. At the moment, a significant part of the available course capacity is being used for the introduction of the latest Ford model: the Mondeo. Two courses exist to inform the technical personnel of the ins and outs of this model, a one-day course for management, and a two-day course for service personnel. The management course focuses on the delivery of the car. Two employees of the dealer business studied here participated. The service personnel course is focused on the running and maintenance of the Mondeo. Most of the mechanics in the dealer business studied here applied to do this course.

The development of new product and repair shop technology has various consequences for in-service training.

- There has been a clear *increase* in the need and necessity for *in-service training*. Until a few years ago, mechanics at Ford dealer businesses spent an average of one day a year on in-service training. This figure is now approximately 3.5 – 4 days a year.

- The in-service training provision is more *structured* now. In the past, dealer businesses could enrol their mechanics for every course. Now an attempt is made to put together course groups of approximately the same level, for example, by dividing the courses into three levels (see Appendix 1), so that there are courses for beginners and for more advanced mechanics. In addition, the Basic Course in Applied Electronics (course 30/11 in Appendix 1) is now an entry requirement for a significant number of the courses on offer.

- A new element is the *clear interrelationship* between the purchase of the latest Ford diagnostic technology and in-service training. Ford dealers may or may not purchase the FDS-2000 diagnostic system. However, if he purchases this system, the dealer is obliged to have the users of the system specifically trained for it. The company studied here purchased the FDS 2000, and several mechanics have now followed the obligatory in-service training.

- This latest diagnostic equipment is *programmed* in such a way that it accurately records the activities carried out so that nothing can actually go wrong with the connection and read-out or measurement. Although error codes can still be read out using the Star tester and measurements made using a calibration cable and a BOB tester, according to outsiders, the Ford Diagnostic System 2000 is the equipment of the future, and not just because it is possible to save a great deal of time with it. The qualifications of mechanics also play a role. The read-out for Zeta engines using an EEC IV computer requires a thorough expertise and a high degree of experience. Anyone who has this will not gain better results with the FDS 2000, but less experienced mechanics will. At present, the FDS 2000 can be used only for the diagnosis of faults in engine management. However, at a later stage the FDS 2000 system will also be applied for the diagnosis of faults in the ABS, the central locking system and alarm systems.

Thus, in the design of product and repair shop technology, the Ford group has had a great influence on the level and nature of the qualifications needed by mechanics in dealer businesses. Furthermore, with the in-service training provision, the Technical Service Training Curriculum (see Appendix 1), the Ford organization also has a great influence on the development of the qualifications of mechanics in dealer businesses. These matters are entirely beyond the influence of the trade unions and employers' organizations in the Netherlands. Ford Nederland BV has hardly any influence on this either, though the organization is very influential with regard to making the in-service training provision *available* to the dealer businesses. A clear illustration of this is the decision to contract out in-service training to INNOVAM. This decision not only resulted in an increase in the course capacity, but in addition, the courses were also brought closer to the businesses as INNOVAM has several course locations.

However, in this sector there are also training activities other than those of the manufacturers/importers. Unions and management in the Netherlands do exert an influence on those activities, as indicated in the sectoral report, which also describes how their influence has increased in the past few years.

The dealer businesses do not actually have an influence on the content of the importer's in-service training provision. However, at their insistence, the capacity for in-service training has increased and been brought closer to the businesses. On the other hand, the dealer businesses certainly do have a clear influence on the content of the in-dealer training. They proposed the subjects for this training themselves.

The decisions on the participation in the course by repair shop personnel in the dealer business studied here was made in particular by the business manager and the repair shop manager.

The employees can voice their wishes, but the decision is made at a higher level. The company does not have a works council, and is not obliged to have one. Consultation between the management and the personnel is informal. There is absolutely no trace of any trade union influence at company level. Obviously the agreements which have been reached at sectoral level between management and unions also apply in this company. Thus the company can claim for as many days of paid leave for training as there are employees.

4.5 The costs and benefits of in-service training

A few years ago the dealer businesses clearly made less use of Ford Nederland BV's in-service training provision than they do now. In a relatively short period of a few years, participation in the courses rose from an average of 1 day per year per mechanic to 3.5–4 days. This resulted in a sharp rise in in-service training costs for Ford Nederland BV in a short time. The dealer businesses pay the sum of 50 guilders per person per day for the in-service training courses provided (see Appendix 1), which includes the costs of providing lunch etc. The other costs are borne by Ford Nederland BV.

Despite the relatively low contribution to the course of 50 guilders per person per day, the in-service training costs for dealer businesses have also increased dramatically in the past few years. In 1987, in the dealer business studied here, the in-service training costs amounted to 3,500 guilders. Since then, the sum has clearly increased. For 1993, the budget amounts to over 30,000 guilders. This sum excludes the costs of lost working hours. The training days reimbursed by the training fund are clearly no longer sufficient at the moment. This is one of the reasons why the company wishes to continue with the in-dealer training. It is true that the importer's contribution to this sort of training is greatly reduced, but this is set against the fact that about 90% of this in-service training takes place outside working hours, i.e., in the employees' own free time.

For the company studied here, it was quite evident that employees had fallen behind in their training. Considerable investments have been made in the past few years to remedy this. The sums involved have clearly increased in recent years to such an extent that a budget expressly for in-service training is now allocated at the beginning of the year.

For the company itself, the need for investment in in-service training is self-evident. Therefore, a systematic analysis of costs and benefits is not considered essential. The knowledge and skills which are taught in the importer's in-service training courses are needed in the company. The certificates provide a reasonable guarantee that the participants have acquired the knowledge and/or skills. Nor is there any systematic analysis of costs and benefits for the in-dealer training. The business manager and/or repair shop manager take part in this training themselves, and their reason for wishing to continue with it is based on their experience. It was pointed out above that the in-dealer training is aimed not only at increasing the mechanic's technical knowledge and/or skills, but also at achieving a (re)distribution of tasks and teamwork in such a way that both the strong and weak points of repair shop staff are used to the best advantage. Because of the differences in learning capacities, the rate and extent of the development of qualifications varies from mechanic to mechanic. In order to achieve the best possible return, the company will have to take this into account from time to time in the organization of the work in the repair shop. The in-dealer training is very important for the involvement of individual team members in this process of work structuring. The commitment and motivation obtained in this way are undoubtedly essential for the repair shop to operate smoothly, but it is difficult, if not impossible, to evaluate these advantages in terms of guilders.

5. Evaluation of the training plan

5.1 The employee questionnaire

Four of the employees in the repair shop filled in the questionnaire (see Appendix 3).

The information given by these four people confirms that during the 1990–1992 period, there was much more in-service training than in the preceding years. During these years, all four people followed in-service training, while only two out of the four had followed any in 1987 and 1988. For one of these two, the training actually took place in the context of the apprenticeship system. This mechanic concluded his LTS education (technical school) in 1973, and then immediately began working full-time in a garage. After a few years he realized that he had few opportunities in the labour market compared with younger mechanics who did have a professional diploma. For this reason he started on the training in 1985 within the apprenticeship system. In 1988, when he was training for chief mechanic, he entered the employment of the company, and he concluded this training in 1989. Since then, he has also followed the training for chief motor vehicle electrician. He followed the whole training course, or at least the theoretical part, outside working hours.
This means that only one of the four people followed in-service training during working hours in the period 1987–1988. This took the form mainly of one-day courses in the importer's in-service training provision.

In 1988–1990 Ford's provision for in-service training was used only to a limited extent. As

Table 3 – Participation in the importer's technical in-service training provision, May–November 1992

	No. of persons who took part	Total no. of course days
1. Launch training Ford Scorpio model 1992 (one-day course)	3	3
2. Zeta engine	5	5
3. Ford Basic Course in Applied Electronics (6-day course)[1]	5	15
4. FDS-2000 (2-day course)	2	4
Total	16 persons	37 days

[1] This course is divided up into blocks of 2, 1, 2 and 1 day(s). 5 people took the first two blocks in 1992.

described above, it was during this period that the great need for in-service training became apparent in dealer businesses. However, the importer's in-service training capacity was not (yet) prepared for this. For this reason, in-dealer training started in 1990 and continued for part of 1991. During this period Ford Nederland BV was contracting out the in-service courses to INNOVAM.

The process of contracting out the courses was completed by the beginning of 1992. One of the effects was that there was now a larger course capacity available. The company made use of this, as can be seen from the questionnaires that were filled in. However, we also have a complete survey of the extent to which the company made use of the importer's technical in-service training provision during the period May-November 1992 (see Table 3).

These figures, as well as those in Appendix 3, confirm that in recent years there has been a great increase in in-service training and, on the other hand, that this in-service training has up to now been virtually exclusively related to teaching the basic principles in the field of electronics and to the familiarization with new products (new models, new components and new repair shop technology).

5.2 An example

The average number of days of in-service training in Ford dealer businesses has increased in the past few years from an average of one day per year to 3.5–4 days. The average for the company under review is clearly above this figure. However, it probably serves as an example more because of the fact that this case study shows that even fairly small businesses, if "they put their heads together", are able to find solutions and implement them when there is a knowledge or skills deficit among staff. In addition, this company is a good illustration of the fact that even a relatively small company can develop an in-service training plan which does justice both to the principles of the organization (employees who can be used on a wide range of tasks) and to the learning capacities of individual employees.

5.3 Future training requirements

The dealer business studied here wishes to continue working in future with employees who can be used on a wide range of tasks. At the moment, mechanics can only be used in this way if they have sufficient knowledge of electronics. Most of the mechanics have been working for the company for many years. When they entered employment, this requirement did not apply. Therefore the company accepts that it will have to teach the mechanics itself (or have them taught). However, it definitely views this as a one-off exercise to catch up on training, which should not take too long. In fact, it believes that it is really up to the normal education system to train newcomers for the labour market adequately, and nowadays this includes a sufficient knowledge of electronics. However, the company does not feel confident that the normal education system will meet this requirement. This probably also plays a role in the company's continued positive attitude to in-dealer training. In addition to the advantages described above relating to the principles of organization which are adopted, and the diverse learning capacities of the employees, this form of in-service training also has a financial advantage. The in-dealer training takes place virtually entirely in the employee's own time. The company's approach is that it is quite prepared to invest in the development of the employees' qualifications, as long as they are prepared themselves to invest in this by making their own time available for this purpose. In this context, the business manager also tries to find ways of stimulating the employees to read the magazine "Autoteam", and to participate in the magazine's competition. At the company staff meeting he intends to propose encouraging this form of self-study with financial incentives.

To summarize, the company considers that in the past few years it has made big investments in in-service training and that this was actually necessary. However, it has now reached a point where there is a good qualifications base. It is now mainly a matter of keeping up to date, and that is partly the responsibility of the employees themselves.

The importer also recognizes that the present wave of in-service training is temporary. This is one of the arguments for contracting out the in-service training activities to INNOVAM, rather than developing greater capacity and infrastructure for the training in the company itself. This strategy makes it easier to reduce the scope of activities, in particular if the subject areas involved are covered by the normal educational system. In

addition, the importer expects that the continued development of advanced repair shop technology will be accompanied by lower requirements and a reduced need for in-service training for the mechanics.

However, this point has not yet been reached. Up to now, the in-service training capacity has been used particularly for filling the gaps in knowledge in electronics. Only in 1993, is sufficient capacity likely to be available to offer intermediate and advanced level courses (see Appendix 1).

6. General conclusions which can be drawn from the company

In a variety of ways, the in-service training practice examined in this case study serves as a general example for the industry.

From training courses aimed at specific makes to general training courses in the sector.
The sectoral report stated that INNOVAM has developed a system defining the positions and tasks of the various training establishments (importers, INNOVAM, LTO schools) in relation to innovation in the sector. With the aim of maintaining a broadly qualified expertise for the sector, agreements have been formulated to adapt the in-service training provision of the importer's training centres, INNOVAM, the apprenticeship system, and standard LTO (lower technical) and MTO (intermediate technical) education. Training courses on the new technology of particular makes is obviously the responsibility of the importers themselves during the introductory stage of such innovations. However, when an innovation is introduced at a wider level, it should gradually be incorporated in the vocational training provision of the sector, starting with the (in-service) training provided by INNOVAM, and should eventually be included in standard technical education when the new technology has become part of basic motor vehicle technology.

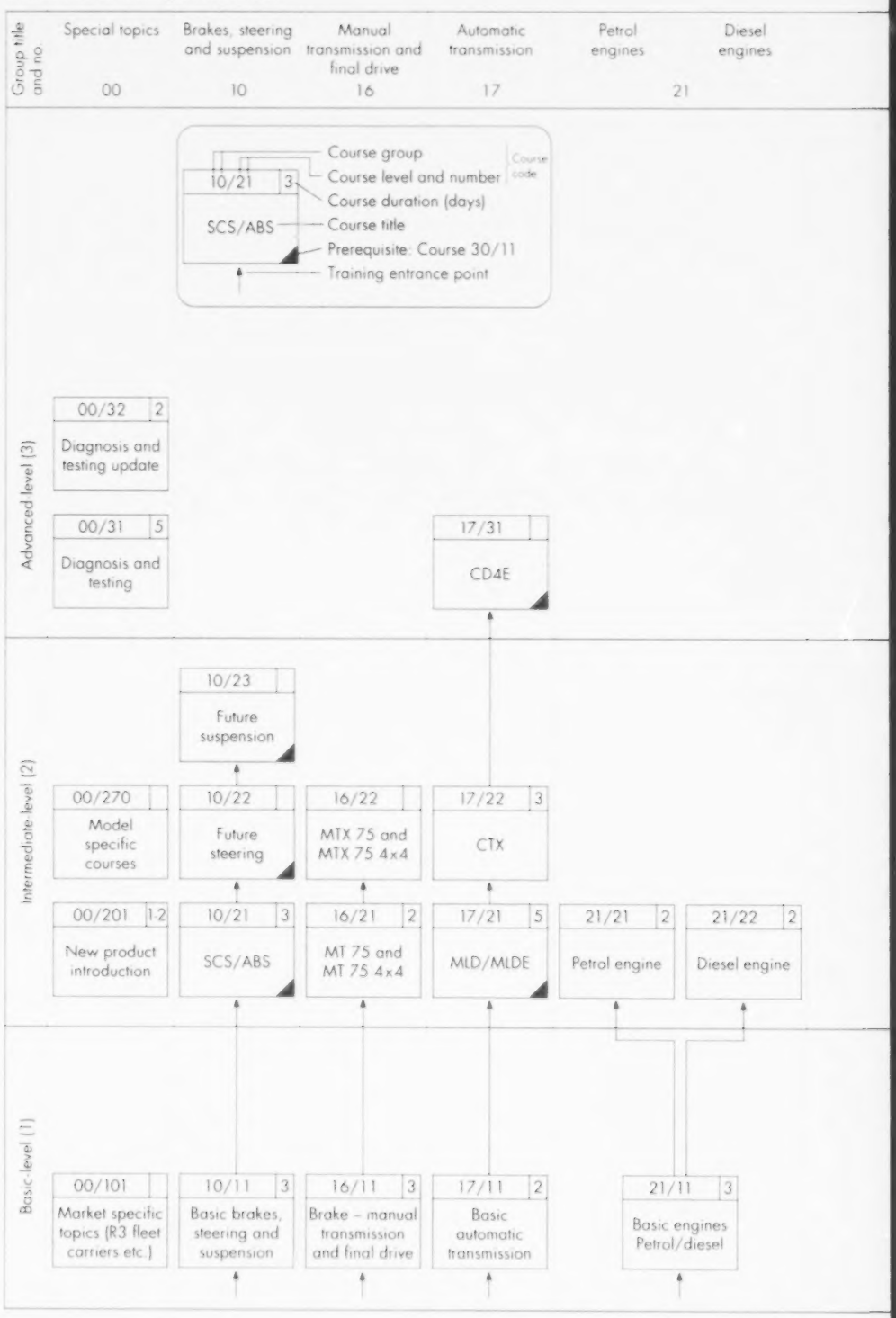
Forms of cooperation such as those described in this case study between INNOVAM and Ford Nederland BV undoubtedly increase the likelihood of innovations in specific makes being eventually incorporated in the vocational training provision of the sector. This is in the interests of both parties, i.e. also the importer, as training aimed at specific makes is not eligible for subsidies from the OOMT fund.

A united front is a strong front.
When a much larger need for in-service training arose fairly rapidly in the dealer businesses during the second half of the 1980s, particularly due to the increasing application of electronics, Ford Nederland BV was not able to provide immediate and adequate in-service training nor had it sufficient capacity for in-service training. However, this case study illustrates how relatively small companies are quite able – if they are aware of their common problems and interests – to seek and find solutions for the gaps in employees' knowledge and/or skills.

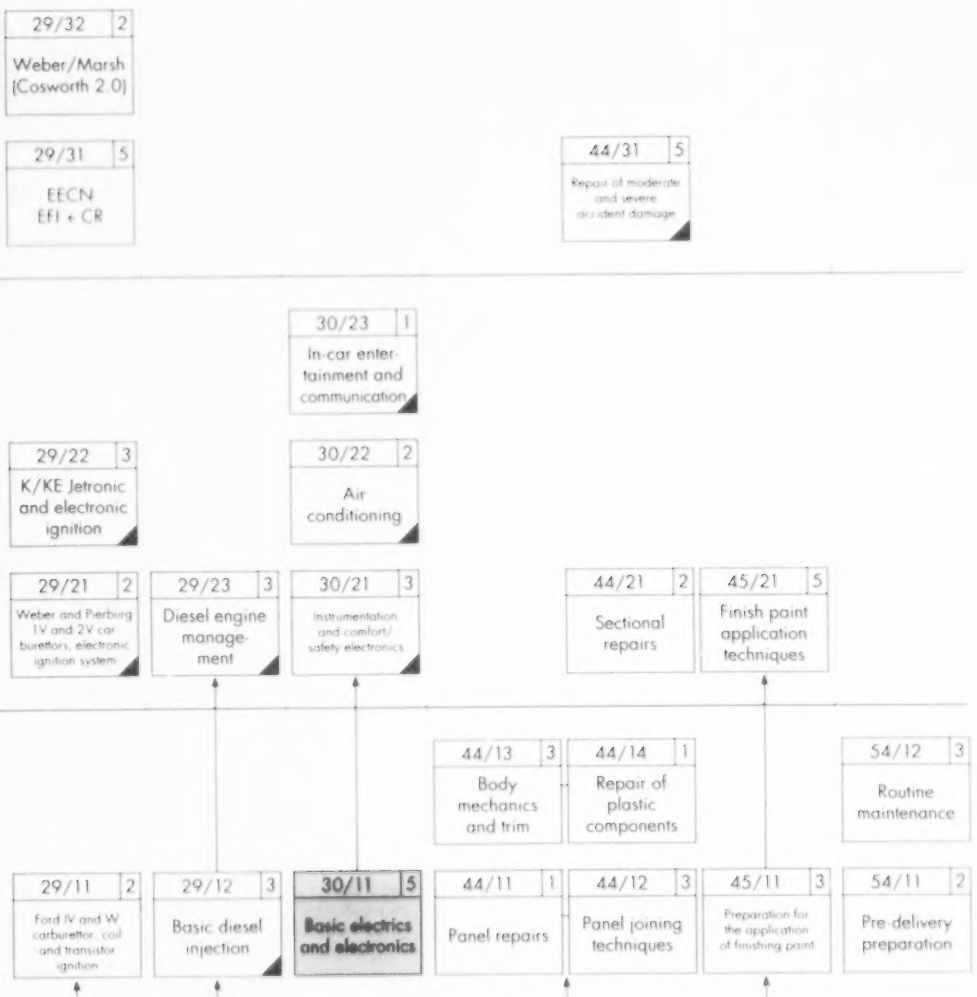
Learning to cope with differences in learning capacity.
Most companies have to cope to a greater or lesser extent with what they have inherited from the past. Ten years ago, the requirements for newcomers to motor vehicle businesses were very different from what they are now. Some mechanics are better able to adapt to today's requirements than others. This company is well aware of these differences and this is taken into account in the in-service training plan. In this way the company is a good illustration of the fact that even a relatively small company can consciously develop an in-service training plan which does justice both to the principles of its organization (employees can be used on a wide range of tasks), and to the individual employees' learning capacities. This means that it does use the importer's external in-service training provision, but only for suitable employees. However, by organizing in-dealer training in the company itself, everyone gets some in-service training in the latest technology and also in the familiar setting of working (together).

2. APPENDIX 1

Technical service training curriculum Ford



Engine management Petrol	Engine management Diesel	Electrical systems	Body and paint	PDI and routine maintenance
29		30	40	54



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APPENDIX 2

2.

In-dealer training Ford/PTH
Overview courses: 1990/1991

• Course 1
Exhaust emission in KE-Jetronic

Theory: various systems for exhaust emission
knowledge of KE-Jetronic system
Practice: measurements using lambda-sensor and circuit pressure regulator

• Course 2
KE-Jetronic

Theory: knowledge of KE-Jetronic system
Practice: measurements using "LED-tester"
measurements using "BOB-kast"

• Course 3
2.0 EFI OHC engine (with catalytic convertor)

Theory: knowledge of the EFI system and the EEC IV computer
Practice: measurements using the "STAR-tester"
measurements using "BOB-kast"

• Course 4
2.0 EFI DOHC engine (with catalytic convertor)

Theory: mechanical knowledge of the DOHC engine
knowledge of the EFI system (with EEC IV-computer)
Practice: measurements using the "STAR-tester"
measurements using the "BOB-kast" with Y cable
(dynamic measurements)

• Course 5
Reading charts of the 2.0 OHC engine with carburettor and hydraulic stepping motor

Theory: knowledge of the carburettor system
knowledge of the ESC II ignition computer
reading electrical wiring charts
(section 36)
Practice: measurements using "BOB-kast"

• Course 6
Anti Blocking System ABS

Practice: measurements using "BOB-kast" with integrated fault diagnosis

• Course 7
Reading charts on the central locking systems

Theory: knowledge of Sierra/Scorpio central locking systems
reading electrical wiring charts
Practice: identifying faults using electrical charts

• Course 8
Central injection system

Theory: knowledge of the CFI system using the EEC IV computer
Practice: measurements using "BOB-kast" with the help of dynamic cable

• Course 9
Car electronics

Theory: knowledge of basic electrics
knowledge of the CFI system using the EEC IV computer
Practice: making measurements in the ignition system, engine and dynamo

• Course 10
2.9 EFI engine (with catalytic convertor and 2x lambda sensor)

Theory: knowledge of the EFI system
Practice: measurements using the "START-tester"
measurements using the "BOB-kast"

4. A LARGE GM-OPEL, BMW AND MITSUBISHI DEALER

1. General description of the case

The fourth case study focuses on the in-service training practice of a large motor vehicle business which is a dealer for three different makes of car: Opel, BMW and Mitsubishi. The business has its own training school where new employees are trained, and where in-service training is also provided for other employees. For the training of its apprentices, it works in close collaboration with INNOVAM, the vocational training institute for the sector. For the in-service training of personnel already employed by the business, considerable use is made of the facilities made available by importers for their dealers. In particular, the business has worked closely with GM-Opel and BMW for many years. As regards in-service training, contacts with Mitsubishi have not crystallized to the same extent. This case study focuses on three organizations:

- the company itself, as the user of importers' courses and as an independent training institute;
- the GM-Opel importer's organization, and in particular the GM training institute which develops and provides GM in-service training courses;
- the BMW importer's organization, and in particular the BMW training centre which develops and provides the BMW in-service training courses.

The developments in the company itself form the starting point for this report. In the description of the training activities in the company, particular attention will be devoted to the provision of the two above-mentioned importers. From time to time the company is also in contact with other training institutes, but this is usually in connection with very specific one-off training requirements. These institutes will not be discussed in detail. However, a separate section examines the in-company training opportunities.

2. General description of the business

2.1 Information on the business

As stated above, the business is a large dealer business which specializes in the distribution and repair of three different makes of car, Opel (GM), BMW and Mitsubishi. The business deals in every model of car made by Opel and BMW, while for Mitsubishi, it mainly sells and repairs light commercial vehicles. For Opel, the company also runs a car rental service. Probably a fourth category will be added to the range in the near future (spring 1993), as the company has been approached by GM to become a dealer for some of its American models (Chevrolet, Pontiac, Oldsmobile, Buick, Cadillac). The company is considering accepting this offer.

The business's activities are structured in the form of a management company, with an administrative office and six operating companies: 2 Opel garages, the Opel rental service, 2 BMW garages and 1 Mitsubishi garage. All these companies are established in the northwest of the Netherlands in a small urban conglomeration, fairly close to each other, within a radius of approximately 20 kilometres. The management company is located in the largest branch, one of the Opel garages; Opel is actually the "mother company" from which the concern developed. The business is one of the largest motor vehicle businesses in the Netherlands. At the time of this study it employed approximately 180 people, including apprentices.

2.2 Brief history and recent strategy development

2.2.1 A brief history

The business is not only one of the larger, but also one of the older motor vehicle businesses in the Netherlands, and certainly one of the older dealer companies. Originally it was a family business and even in the present company structure the ties between the business and the family are still fairly strong. The company was established before the war by the grandfather of the present managing director. After working for a time as a private chauffeur, he started the first so-called "motor vehicle centre" in the region in 1922, with his own car. This was a private transportation company. He was soon able to buy a second car, and rent premises for garaging buses and the maintenance of other people's cars. In 1925, he moved into new premises, which were expanded with a large garage, and in that same year he employed his first mechanic. In 1932, he acquired the General Motors dealership. This proved to be a good choice. In the years leading up to the Second World War car sales increased sharply and the company expanded to become a well-known dealer company, selling 70 to 80 cars a year towards the end of the 1930s. The company also engaged in other activities (petrol sales, a travel agency, a coach business, group transportation, a taxi service, and an ambulance service). The number of personnel gradually increased, and in 1933 the former one-man business became a limited company. The members of the family remained the most important shareholders.

After the Second World War the company expanded rapidly. Growth during the 1960s and 1970s was particularly pronounced. In 1964, a second Opel branch opened in a neighbouring town. For a long time the company continued to be active in other sectors (coach tours, petrol stations, a driving school), but with the growth in car sales it increasingly focused on its core activities: the sale, maintenance and repair of cars. The touring coach business was sold in the

early 1960s. Following the 1974 oil crisis, most of the petrol stations were also sold off. However, in 1975, a separate business activity was set up for leasing activities, particularly for the long-term commercial leasing of cars.

Car sales gradually increased. In the mid-1970s between 600 and 700 cars were sold every year. In 1987, 1,160 were sold, and in 1992, the number was about 1,100.

2.2.2 Recent strategy

As regards the core activities – the sale, maintenance and repair of cars – since the beginning of the 1980s, the business has adopted a strategy of expanding the range and of spreading risks. The Opel activities remain the core of the business, but at the same time the group has expanded into other market sectors.

In 1980, new premises were bought with the intention of marketing American cars through a sub-dealership of GM. However, these plans did not come to fruition because of the unfavourable developments in the dollar exchange rate. By chance, a BMW dealer in the area went bankrupt at the same time, and the company was offered the BMW dealership. It decided to accept this offer and organize the new premises as the BMW branch. As this new agency was not compatible with the Opel dealership, it was necessary to incorporate the BMW activities in a separate (private) company. This expansion of activities into a new market sector, a sector covering more expensive business cars, proved to be very profitable in retrospect: BMW's market share has increased in the last 10 years and the company's turnover has grown correspondingly. In 1987, 235 BMWs were sold, 250 in 1992.

There was also expansion in the light commercial vehicles sector. Since 1984, the company has been a dealer for the Japanese make, Mitsubishi. For a long time the Mitsubishi section was housed in one of the Opel facilities, but recently the activities were separated because GM also became more active in the commercial vehicle market (ex-Isuzu) and no longer considered it acceptable for its Opel dealers to have a competitive make in-house. For this reason the Mitsubishi activities were transferred to a separate company. In 1987, 72 commercial vehicles were sold, in 1992 the number was 148.

Recently plans to expand into yet another, third new market sector were implemented. At the end of 1992, GM again approached the company with the request to start marketing American GM models, and recently it was decided to accept this dealership. A separate location was bought for the new GM activities and the new company started to operate as of 1 January 1993.

2.2.3 Impact of new technology

A great deal has changed in the business in the last 10 years, not only commercially, but also as regards technology and infrastructure. It has obviously felt the consequences of the electronics boom in the motor vehicle industry. As a result, the nature of the work has changed both in the Opel and the BMW companies.

Since 1985/1986, there has been a constant increase in the application of electronics systems in new Opel models. Opel had already started with engine management systems in the early 1980s, but until 1985 these were incorporated mainly in the top models. Since then all sorts of new systems have been added, and these systems are also increasingly being used in the cheaper models. In the latest models (Astra, Corsa), many functions are electronically operated (injection, suspension, shock absorbers etc.). Electronic injection systems were found only in the large models in 1986, but they are now standard in every model as a result of the more stringent environmental requirements. This has had significant consequences for the repair shop. While the ratio of mechanical to electronic work in 1985 was still 60–70% to 30%, this figure has since been reversed; only 30–40% of the work is mechanical work, while 60–70% involves electronics. In order to work with this new technology, the company also purchased the repair shop equipment specially developed for Opel.

BMW has been using all sorts of electronic systems in its models for far longer. The first engine management systems date back to the early 1980s. More than any other make, BMW has assimilated the new electronic technology. The more expensive models in particular have a large number of built-in electronic devices for a variety of functions: injection, ignition, suspension, brakes, steering, rear axle regulation, lighting, locking, alarm systems, parking indicators, air conditioning, car audio systems, telephone, video etc. However, new systems are also increasingly being used in the cheaper models. Most models are now equipped with dashboard computers which constantly monitor driving performance and register deviations while the car is in motion. During servicing they are linked up to the testing equipment and immediately provide an indication of irregularities and faults. Parallel to the car technology, over the years BMW has also constantly developed new repair shop technology (measurement and testing equipment). No dealer can do without this, and this company also has various types of testing equipment in-house.

Obviously these developments are reflected in the work that comes in. 50–60 per cent of the work currently carried out in the BMW repair shops consists of electronic work. The rest is mechanical repair work and maintenance.

According to the BMW importer, the new technology clearly implies an upgrading of the mechanic's job, particularly because of the shift from mechanical to electronic tasks: "The increasingly advanced testing equipment does not affect this in any way. Admittedly, detecting the faults is increasingly computerized and taken over by technology to a greater extent, but there is enough left to be done on the basis of the mechanic's own intuition and experience. In addition, the number of systems in the car has increased to such an extent that the work remains complicated. It is so complicated that you can no longer work in the old way. Mechanics now receive a print-out of the fault and no longer have to find it themselves, but in fact they would no longer even be able to do so. The electronics have simply become so extensive and complicated. All these regulation systems make much higher demands on the mechanic's knowledge. Anyone without a feeling for electronics and computers can forget trying to work in our organization. They are no longer any use to us."

2.3 Structure of the company

2.3.1 Company organization

Over the years the company has expanded from a simple motor vehicle business to a holding company with six operating companies. The business currently has the following overall structure:

All these companies have the legal status of a private company (B.V.). The management company is run by a board of directors and also has a supervisory board. The members of the family have an important share of the votes on both boards. At present, a grandson of the founder is the director of the management company, and as such he is managing director of the company. The administrative office, the larger BMW garage (1) and the Mitsubishi garage have their own directors. The Opel garages and the smaller BMW garage (2) are run by a business manager. The Opel leasing company falls directly under the management of the administrative office. The directors and business managers of the branches are accountable for their own budgets and profits. They draw up their own annual budgets, submit these to the board of directors for its approval, and justify the results to the directors and supervisors at the end of the budget period. In order to balance the running of the business properly within the holding company, every week at a set time there is a management meeting of branch directors and business managers, chaired by the managing director. This meeting deals, inter alia, with major investment decisions and personnel matters are coordinated, for example, in recruiting and moving employees. Decisions on apprenticeship recruitment can be made by the branch managers themselves.

2.3.2 Job structure

Depending on their size, and the supply of work, the various branches have different job structures:

- The Opel garage (1), the largest branch, has approximately 75 employees. The branch runs a large petrol station and comprises a large repair shop for damaged vehicles, which also takes on the repair work for other branches. The business employs 7 sales persons, 7 employees in the stores, 16 petrol pump attendants, 15 mechanics for damaged vehicles, and approximately 30 repair shop mechanics. The other employees work in personnel and administration.

- The second Opel branch has some 45 employees: 8 in sales, 7 in stores, and 30–35 in the repair shop.

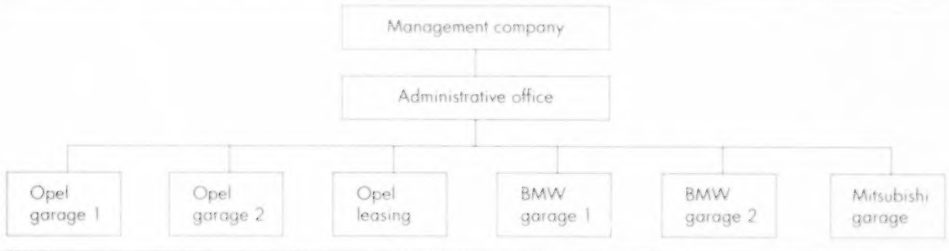
- The larger of the two BMW branches contains a large parts store. This branch employs 15 people, including 2 employees in stores. In addition, there are 2 sales persons and approximately 6 mechanics. The training school is also located in this business.

- The smaller BMW branch, an independent dealer, has 9 employees, including 2 sales personnel and 5 mechanics.

- The Mitsubishi business employs 6 employees, including 2 mechanics and 2 sales personnel.

- The Opel leasing company also employs 3 employees, who all work in administration.

Organizational Chart



- The administrative office is staffed mainly by administrative employees, staff personnel, and a number of managers.

Looking at the business as a whole, the ratio between the different types of employment is approximately as follows:

- sales personnel (including leasing personnel) 15%
- technical personnel (including a group working on damaged vehicles) 54%
- stores personnel 11%
- administrative personnel 15%
- (higher) management personnel 5%

At the time of this study the business employed 21 apprentices who were following the vocational training for car mechanics. They are included in the above-mentioned figures.

2.3.3 Work organization

In order to give an impression of the way in which the work in the garages is organized, we will take a closer look at the organization of work in the large Opel branch (Opel 1) and the large BMW Branch (BMW 1). The work in the other Opel and BMW garages respectively is organized along the same lines, although certain differences exist because of the differences in the work coming in. We will focus primarily on the organization of work in the repair shop.

The repair shop in the large Opel business is managed by a repair shop manager. The work is distributed between four work units, each with its own manager/foreman:

- the group for the repair of commercial vehicles (manager + 3 mechanics); this group carries out repairs on commercial vehicles; all commercial vehicle repairs, including those for other branches, are done here;

- the inspection group (foreman + permanent mechanic + 4 apprentices); this group carries out all the maintenance work, mainly the annual services as prescribed in the Opel maintenance programme; the apprentices in the group mainly work as assistants;

- the delivery group (foreman + mechanic + 3 assistant mechanics); this group works on preparing new and second-hand cars so that they are ready to drive away; the assistant mechanics mainly carry out basic work, such as assembling simple accessories;

- the car repair group (manager + 12–15 mechanics); this group carries out repairs, both those arising from service inspections and those coming in directly from the customer.

In addition to these groups, another separate mechanic works on checking cars, carrying out test drives etc. Apart from the repair shop, there is also a separate repair shop for damaged vehicles, as stated above, where the work on damaged vehicles from all the branches is concentrated. There is also a separate store for parts.

New work comes in at reception (by appointment or directly from off-the-street customers) and is planned using a planning board. The mechanics are timetabled using cards indicating the standard period of time for repairs and services. The planning always allows some space for clients who come into the business with smaller problems; for larger problems an appointment may have to be made. Contacts with clients always go through reception, which is staffed by a receptionist who is qualified as a chief mechanic, and two assistants, a telephonist and an administrative employee.

In the repair group any mechanic can be assigned to any type of work that comes in. Some mechanics are specialized in particular types of work. Recently the business gave two mechanics the opportunity to specialize in American cars in connection with the new GM-USA dealership. In addition, one man is specialized in all the electronic work ("He knows all there is to know about it.") Another employee is currently acquiring specialist knowledge in this field, encouraged by the business because it does not wish to be too dependent on one person. The business does not consider it necessary to have more than these two specialists. The other employees receive enough in-service training from the importers' courses to be able to deal with electronics jobs (60–70 per cent of the work coming in).

The work is organized slightly differently in the BMW garage. There the work is distributed to a lesser extent than in the Opel business. In the BMW repair shop there are no individual work groups, and in principle all mechanics carry out all the work that comes in, i.e. both repairs and services and maintenance. However, one person is specially employed to prepare cars for delivery, because this often involves a lot of extra work for the more expensive BMW models which have a large number of accessories; this employee is also specialized in air-conditioning systems. In addition one mechanic is trained as a motor vehicle electrician and is able to do more difficult electronic repairs, but in practice this actually has little influence on the distribution of the electronics work. All the mechanics have achieved virtually the same level of knowledge of electronics through the importer's training, and in principle they all carry out the electronic work that comes in (50–60 per cent of the incoming work).

In the BMW business the clients also go through reception, where the work is accepted and scheduled. In this business the repair shop manager is also the receptionist. He receives the clients, sees what needs to be done, arranges when it has to be finished, plans the work on the planning board, and distributes it amongst the mechanics. In the mechanics' daily schedules the more difficult repairs are usually scheduled for the beginning of the day, while the more routine jobs are left to the end of the day. In this way the risk of overtime as the result of repairs which take longer than expected is restricted as far as possible.

2.4 Human resources

As stated above, the number of personnel in the business increased significantly in the 1960s and 1970s. At the end of the 1970s, the business employed more than 200 people. This was reduced to approximately 180 at the beginning of the 1980s, mainly because of the sale of the petrol stations. Since 1985, the size of the business has remained stable and the number of personnel fluctuates between 160 and 180, depending on the number of apprentices. There has been a slight decline in the number of jobs taken on, mainly because of the trend for the intervals between services to become longer.

For a number of years the business has adopted a specific recruitment policy. New employees are not recruited directly from the external employment market, but are recruited from the apprentices who are following their vocational training as car mechanics in the business. On average, approximately 20 apprentices are employed at any one time under an apprenticeship contract. They follow INNOVAM's basic vocational training under the apprenticeship system. This figure of 20 is higher than is actually needed to meet the demand for personnel in the long term. However, extra apprentices are deliberately taken on so that, as the trainer says: "The best apprentices can be selected from this group." Thus the apprentices are clearly informed that there will not be a job in the business for every one of them at the end of the training. After the training there is an assessment, and where there are vacancies, the most suitable apprentices are selected for these. The trainer and the repair shop manager jointly carry out assessment and selection. The most important selection criteria for a vacancy are:

- progress during training;
- successfully passing the examination in the two years allotted for this; an extension to three years is not possible;
- the quality of work in the repair shop;
- the apprentice's technical insight; particularly the insight which is revealed by the way in which he approaches problems, i.e. his problem-solving skills;
- his initiative; he must be able to work well independently;
- his potential; he must be capable of further development.

According to the trainer, aspects of behaviour often play an important role. Also, an insight into and a feeling for electronics plays a particular role in selecting who is and who is not suitable for the BMW businesses. These businesses make higher demands in this field than the Opel garages. Sometimes there are apprentices who successfully complete their training and whom the business would like to employ, but for whom there is no vacancy at that time. In this case there is a possibility of taking them on temporarily in a sort of rotation system until a vacancy arises in one of the branches.

Obviously, new apprentices are recruited from the external labour market. The initial qualification requirements are high: MAVO (secondary education) with a final certificate, or HAVO/MTO (higher education/intermediate technical education) without a certificate. No apprentices, or very few, are taken from the LBO (lower vocational training) level; this level is considered too low for the business. Of the present 21 apprentices, only two come from LBO, where they took motor vehicle technology. The others come from MAVO, HAVO and a few from other LBO courses, including LBO electro-technology.

3. The provision of continuing vocational training

The business attempts to keep its personnel up to date as regards qualifications, not only by a policy of recruitment at a fairly high level, and the internal training of new employees, but also through providing in-service training for employees. Part of the in-service training takes place internally in the business's own training school, but most of it is carried out externally at the GM-Opel and BMW importers' facilities. Below, we will briefly discuss the structural aspects of these internal and external provisions for in-service training. We will then go on to explore the in-service training policy, the content of the in-service training provision, and its use by the personnel of the various branches of the business.

3.1 Structure within the business

For a long time the business has had its own training school, a classroom in one of the BMW premises. The school is mainly used for training apprentices, but it is also used for all sorts of in-service training activities. For many years, internal electronics courses were given there which were developed by the business itself for its mechanics (see section 4), and even now the classroom is still frequently used for in-service training, for example, for video training sessions for BMW mechanics (see section 4). The school has all sorts of modern measurement and testing equipment, and in the classroom there are practice engines and various component systems (carburettor, ignition).

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A variety of equipment and tools is available for practice, along with workbenches, electrical boards etc., as well as modern video equipment. Obviously there is also a large selection of documentation and car manuals available. The training school is also used for lessons for people on work placements and for apprentice mechanics from other businesses who are temporarily seconded to one of the branches on the basis of the GOA, in which the business participates.

The classroom also contains the office of the business's training coordinator, an ex-mechanic employed since 1985, who followed INNOVAM's (long) training course for instructors, and is now spending all his time on training. In recent years his job has gradually expanded from the job of a traditional instructor to a job as head of the business's training courses. This job contains two central task areas:

- coordinating the supervision of INNOVAM's apprentices; the actual supervision on the shop floor is carried out by experienced mechanics/instructors in the different garages;

- the coordination of external training with the importers (GM-Opel, BMW and Mitsubishi), and any other external institutes; in this capacity he is responsible for activities such as arranging employees' course schedules, enroling employees for, or withdrawing them from importers' courses, consulting with repair shop managers and mechanics about who could/should do which course, maintaining contacts with the importers, informing people about new provisions, administering who has taken which courses, managing teaching materials, resources, etc.

As regards in-service training, the role of the training coordinator can therefore be primarily characterized as that of a training agent; he coordinates the demand (from the business) and the provision of training (with the importers), and in so doing he keeps up to date with developments in the business's requirements on the one hand, and with the provisions of importers and other training institutes, on the other. In addition, he often teaches and supervises those taking courses.

3.2 Structure of the GM-Opel training centre

Many employees in the business have followed or are following extra training courses at the GM-Opel training centre. Until 1987, the whole of this training centre was part of GM-Nederland, the importer of GM-Opel and GM-USA, and as such part of the GM group. At the time, the centre had three instructors, all employed by the importer. The centre had a number of classrooms of its own which were equipped with modern training equipment and modern teaching resources.

In 1987, the training centre was completely reorganized. GM Nederland started to contract out its training, and concluded contracts with two private agencies for this purpose; one agency for technical training (the TTA), and one for commercial training (the DOOR). Both agencies were set up on GM Nederland's premises, recruited a professional staff and concluded a rental contract with GM for the training rooms and the training equipment. Both agencies have a permanent client/supplier relationship with GM and not only offer training courses, but also develop new ones.

The technical training centre (the TTA) has expanded particularly strongly since 1987, as a result of the marked increase in the demand for training. From a one-man business it rapidly expanded into a company with almost 30 employees, including a large number of highly qualified trainers with HBO (higher vocational training), HTS (higher technical school) or technical teacher training backgrounds. TTA works not only for GM-Nederland, but also carries out training missions for GM branches in other European countries (Germany, Belgium, Luxembourg). It not only runs the training courses, but also develops new courses and provides "training for trainers" courses for the whole of the Benelux. It produces its own teaching resources specifically for GM, which are also used outside the Netherlands. Currently the company has the following departments:

- training in the Netherlands;

- training in Belgium/Luxembourg;

- a desktop publishing group; this group produces written teaching materials for trainers and course participants (course books, manuals, trainer guides, repair shop manuals etc.);

- a department for producing mechanical teaching materials, such as practice engines, lesson boards, dismantlable gearboxes etc.;

- a service feedback group; this group functions as a sort of "help-desk", a support group which the mechanics from dealer businesses can consult when they are faced with problems they cannot solve themselves; this group also produces specific service bulletins on questions and problems which arise frequently (e.g., for new models and systems), and these service bulletins are distributed to dealer businesses throughout Europe.

The TTA is concerned with technical training, and therefore mainly trains dealers' technical personnel. However, it also provides training courses for sales personnel when new models are introduced. Admittedly the DOOR is the leading agency for commercial training courses, but the DOOR and the TTA cooperate closely on new models. In this

respect, the TTA is responsible for the technical part of the introductory training.

3.3 Structure of the BMW training centre

The employees of the business's two BMW branches frequently follow external training courses at the training centre of the Dutch BMW importer, BMW Nederland BV, a full subsidiary company of the German BMW group. This training centre, which is part of BMW Nederland's Technical Service and Marketing Department, maintains two training institutes: one for commercial training courses and one for training in technology and repair shop organization. The centre has four qualified trainers, two for the commercial and two for the technical training courses, and is run by the head of training. This departmental head coordinates all internal matters and maintains contacts with other departments of the organization (including the technical external service). In addition, he himself provides the training in the field of management and organization. The four trainers and the departmental head are all employed by BMW Nederland on a full-time basis.

For the technical training there are two training units available to the centre. Both consist of a normal classroom and an adjoining practical room, so that two course groups can always be trained at the same time. Modern training equipment is set up in the practical rooms: engine blocks of various models with the related injection and engine management systems, gearboxes and electroboxes which can be dismantled, different sorts of testing and measuring equipment, and complete demonstration cars and two-wheeler engines. Each classroom also has interactive video equipment and simulation panels for courses in various electrical and electronic systems (lighting systems, bodywork electronics). The operation of the systems can be explained, various faults can be simulated, and the way in which these faults should be dealt with can be demonstrated on the panels. The written materials used for this training, particularly the course books, are produced by the centre itself based on the manufacturer's manuals and instruction materials. The video material is not made by the centre, but comes directly from the manufacturer; the tapes are simply translated into Dutch and dubbed at the centre.

Virtually all the BMW courses are given at the training centre itself. Courses at other locations, e.g., dealer training courses, are given only in highly exceptional cases, and these are mainly related to sales training. Recently the centre has started to cooperate with INNOVAM, and the elementary electronics course, one of the basic courses provided by BMW, has been contracted out to INNOVAM instructors. Currently this course can be followed in two of INNOVAM's regional practical centres. This course was contracted out partly because of capacity problems, but partly also because it is felt that this sort of basic provision should be provided not by the importer, but should be part of the general vocational training. The importer should use his capacity more particularly for technical training related to specific makes. Moreover, it is not completely clear how long this arrangement will continue. This depends partly on the demand for basic courses in the dealer businesses, and this demand is currently no longer so great. Most BMW mechanics are already working at a higher level.

3.4 Other institutions

The GM-Opel and BMW importers' organizations are the business's most important training partners. There are fewer contacts with the Mitsubishi importer. This importer does not have its own training centre, and Mitsubishi's training provision has not developed to the same extent. The importer has appointed one permanent trainer, who is working on developing a training schedule, but up to now courses are mainly organized depending on the demand from dealer businesses, and as yet there is no programme of courses for which employees can enrol, though the importer is working on this. In fact, it is customary in the Mitsubishi organization for new dealers to place mechanics temporarily with existing dealer businesses, so that they can learn there; this was also the case in the business concerned here. Furthermore, the Mitsubishi branch is currently in the process of recruiting a new, experienced Mitsubishi mechanic from another business as another way of acquiring the necessary knowledge.

Apart from contacts with importers, there are also occasional contacts with suppliers of specific equipment or specific components for training related to these. For example, a training course was recently organized for a number of mechanics responsible for fitting LPG systems. This course was commissioned by BMW to be developed by the supplier of the systems, and was held in the business concerned.

4. The business's training policy

4.1 Training concepts at the repair shop level

Although no official policy plans or plans of action have been developed yet, for many years the business has adopted a very clear strategy with regard to the provision of qualifications. This strategy can be described as a combination of a basic training strategy and an in-service training strategy. It was mentioned above that the business does not recruit ready-qualified new employees from the external labour market, but recruits school-leavers and then trains them as mechanics using INNOVAM's vocational training provision and its own training in the business. After passing their mechanic's examination, some of these

apprentices are given a job in one of the branches of the business. On average, about 12 new apprentices are given jobs every year (generally around 20 are employed at any one time) so that the business can always rely on a sufficient number of qualified new personnel coming in.

However, this training strategy for new employees is merely one element of the qualification policy. Another element is the in-service training of qualified employees by means of the training programmes for specific makes; these programmes are provided by the importers. The GM-Opel and BMW importers provide a differentiated selection of in-service training courses for their dealers' employees. Within this, employees can obtain specific training for specific needs, but can also follow programmes to qualify themselves for higher or more specialized jobs in the dealer organization. Both GM-Opel and BMW provide such career programmes for repair shop personnel. GM-Opel also offers a specific programme for sales personnel.

The business studied here frequently makes use of the importers' provision, particularly for in-service training in the technical field. Up to approximately 1991, the aim of this was not only to maintain mechanics' qualifications at a certain standard, but also to make up for a deficiency in qualifications, particularly in electronics, and particularly in the GM-Opel branches. After 1991, when this deficiency had largely been remedied, in-service training became more a matter of periodically updating knowledge and skills in connection with the introduction of new models, technologies and systems. Thus slightly less effort was put into training in the Opel branches after 1987–1991, years devoted to overcoming the training deficit, although the amount of training provided still remains substantial (see sections 4.4, 4.5 and 4.6).

The importers' arguments for the need for constant in-service training of repair shop personnel is based on the concept of quality of service. It is argued that in the current pressurized market, competitive advantages can be obtained primarily through good after-sales services and good and rapid service to clients in the repair shop. Repair shop personnel should be trained in the technical, organizational and commercial fields to such an extent that they can provide the best possible service. In the BMW organization, where product image, product technology and product quality have always been important competitive instruments, and continue to be so, an increasingly important role is being assigned to the quality of service in the repair shop.

In the following sections, we will examine how in-service training is specifically used for improving the quality of service in the Opel and BMW businesses. In section 4.4, we will begin by discussing the types of in-service training provided by the business itself and by the importers. In section 4.5 and 4.6 we will then go on to examine the in-service training activities of the personnel and the costs of in-service training.

4.2 Training plans

4.2.1 Training plans within the business

The business has developed its own training provision both for new apprentice employees and for employed mechanics who need in-service training. Since the 1960s, apprentice employees have received specific vocational training, supplemented by extra training in the business's own school. Apprentices are taken on part time, and conclude an apprenticeship contract under which they attend school two days a week and have two to three days of practical training, of which one day is in a GOA. Initially new apprentices spend four weeks in the business's own school, where they follow the business's induction course. After four weeks they go into the repair shop. They are split up between the two Opel garages, and begin by joining the inspection group, where they assist with maintenance activities. They are assigned to experienced apprentices and older, experienced employees, and are supervised by the foreman and the instructor. The aim is for them to gradually learn to work more independently. After a while, when they have sufficiently mastered the maintenance work, they rotate through the other departments, according to a particular rotation schedule – the repair groups then the damages department – and they also spend time working in the BMW branches. Every apprentice spends six to eight weeks in each department. In addition, apprentices follow practical training at INNOVAM's regional practical centre, which currently accommodates the GOA arrangement. At the end of their practical training, they return to the business's own school for another 6–8 weeks, where experiences and problems are discussed, and where they are prepared for the theoretical and practical examinations. Subsequently, some of those who pass the examination are taken on by the business as mechanics. According to the business, this procedure forms a good basis for further qualifications. The knowledge and skills required for specific makes can then be acquired by means of in-service training courses.

As regards technical in-service training, the business had not always been able to meet, to the extent which it does today, its in-service training requirements with the help of the external provision (from the importers). The business itself initially played a large part, particularly as regards the in-service training of Opel mechanics in electronics. Since 1985/1986, all sorts of new electrical and electronic systems have been introduced in Opel models at a very fast rate, and in the business's view, the Dutch GM-Opel

training centre responded rather slowly to this at the time. As the business feared that the deficiency in knowledge would become too great if it waited any longer for the importer's initiative, it decided to set up its own training programme in 1987, so that the older Opel mechanics in particular could become familiar with the basic principles of the new motor vehicle electronics. To achieve this, a basic course was developed by a group of employees consisting of the instructor, a repair shop manager, and an electronics specialist from the Opel business. The group asked the importer for information about what was expected in the field of electronics; courses on other makes were examined, including those for its own BMW businesses, and INNOVAM's teaching materials were consulted. With the help of this information, the business developed its own programme for the course, which could be followed by groups at the business's own school. It also developed its own teaching materials for the course (sheets, calculation exercises, circuit diagrams, electrical installations box, etc.) and trainees could undertake practical exercises in the classroom. This mainly theoretical programme ran for a total of 20 evenings and had two primary aims: to impart a basic knowledge of electronics and to introduce GM-Opel's central injection system, which was new at the time. The primary target group consisted of the older mechanics (who had left school around 15 years before) and who lacked any basic knowledge of electronics, and in many cases were also wary of the new technology. The aim of the course was to overcome the mechanics' fear and to enable them to solve smaller electronics problems themselves, so that they would not have to bother one or two specialists every time. When the mechanics on the course returned to the repair shop, they received extra supervision for a while, and an attempt was made to give them as much practical experience as possible, for example, by using them for particular faults or by getting them to detect faults which had been specifically built in in advance. Between 1987 and 1991, approximately 60 mechanics from the two Opel branches received in-service training in this way, always in groups of 14–15 mechanics at a time. In 1991, the course came to an end, because the mechanics had received sufficient training and the importer and INNOVAM had developed good training in this area.

4.2.2 GM-Opel's training plans

At present, GM-Nederland's provision is therefore frequently used for in-service training. Since 1987, GM-Nederland has commissioned the TTA and the DOOR to develop extensive training provision for the management and the technical, commercial and administrative personnel of dealer businesses. Appendix 1 of this report contains a survey of the courses in the first half of 1992 to give an impression of the training provision of these two institutes. When it comes to technical training, we find a strikingly large number of electrical and electronics courses. There has been a great demand for training in this field at GM in recent years, to the extent that between 1987 and 1991 virtually no more mechanical training courses were given. During this period the GM organization made great progress in catching up, and the mechanics at the dealers were successfully trained to the required level in electronics. Since 1991, there has been an increase in mechanical training courses, and the ratio between electronics and mechanical courses has once again returned to approximately 50%–50%. Roughly three sorts of technical training can be distinguished:

- The Opel Electronics Cycle, a basic training course for the Opel Motor Vehicle Electronics Specialist certificate. This cycle is arranged in modules and comprises a total of six courses, each lasting two days. It begins with a course in basic electronics. The subsequent courses cover Opel's various ignition, injection and testing systems (Ecotronic, Motronic, Multech, Tech-1, etc.) In principle, all Opel mechanics can enrol for this course, including those with no electronics training. There are no entrance requirements for the first course in the cycle. However, there is a test at the end of the first day to eliminate those who really are not sufficiently motivated or qualified to follow the course. The other courses of the cycle are tiered. Each module can be followed only when the previous modules have been successfully completed. GM advises dealers to ensure that at least 50% of their mechanics follow the cycle.

- Electronics follow-up courses and specialist courses, modules for various systems which Opel has introduced over the years. These include courses for specific electronics systems (interior electronics, chassis electronics) or for specific parts (gearbox, alarm systems, LPG system, etc.). These courses, which also last one or two days, are usually available only to more experienced mechanics who have at least completed the electronics cycle.

- Introductory training courses for new models. These courses are provided by the TTA in cooperation with DOOR; the TTA provides the technical training (including that for the sales personnel), and DOOR provides the commercial training. The courses are usually given for groups shortly before the introduction of a new model, and the technical part is given at three levels: for managers, for mechanics who have followed the electronics cycle, and for mechanics who have not followed the cycle. At the first level, additional emphasis is placed on the testing equipment, at the second level on electronics, and at the third level on matters such as brake systems, the exhaust etc.

All the courses are given at the GM training centre, and from the educational point of view, they usually consist of one day of theoretical and one day of practical training. On the first day, theory is taught by an instructor to the whole group, usually consisting of 12 people. He goes through the contents of the course book, discusses it, and may apply it to situations and problems which are raised by the group. On the second day, the content of the lesson is practised in pairs in exercises in the practice room. In general, this practical part comprises a whole range of measurement, adjustment and tuning tasks.

The GM provision of courses is flexible, very variable and can be easily modified, depending on needs. Out-of-date courses for which there is no longer any demand are withdrawn, and new courses are included. The business is able to organize a new course very quickly given its own capacity for development. For example, one important new project being developed at the moment is a course for diagnostics specialists. This will probably be a longer course of four or five days, aimed at mechanics who have followed the electronics cycle, and who are often involved in diagnostics activities in the business. It trains them in problem-solving strategies. The importer will endeavour to ensure that at least one employee in every dealer business follows this course. In addition, a course is currently being developed for training mechanics to use the new Opel testing equipment, which is soon coming onto the market. A third project concerns the development of a new course on automatic gearboxes.

The training centre uses different methods to keep up to date with new developments in the field and to identify new training requirements. In this context an important role is played by the TTA's service support group, the department which supports dealers in handling technical questions and problems facing their business. The questions raised by the dealer businesses are carefully recorded by this department, stored in the computer and regularly analyzed to identify common problems. This information shows whether (extra) training might be needed for particular parts or systems, and a provision can then rapidly be developed. Another source of information on training requirements consists of data on the use of parts. Again an analysis of this can show that there may be skill problems at some level (e.g. in the case of the excessive use of particular parts), for which a new course must be developed. The dealers themselves are obviously a third source of information. They can contact the trainers directly to point out problems with particular areas of knowledge and training requirements in their businesses. The instructors in the businesses play a very important role in this respect. Finally, the fourth form of input is information from the manufacturer. Particularly when new models are introduced, there is frequent contact with the manufacturer to obtain information about the new technology which is applied, and to determine the form of the training courses in the dealer organization. In most cases the TTA trainers are themselves trained in the first instance by the manufacturer, and then make use of their knowledge so that they can run training courses for Dutch dealer businesses. However, it also happens that the manufacturer contracts out all the training, and that the TTA is contracted to develop a training programme for the whole Opel organization, not only in the Netherlands, but also in other EC countries, obviously after following a course of instruction in the parent company. The organization of the training content can then be partly determined by the TTA. In doing this the TTA has a reasonable possibility of adjusting training to national and regional situations. GM does not yet have a centralized European training policy, although it is in the process of developing one.

4.2.3 BMW's training plans

Over the years the BMW importer, too, has developed extensive training provision for its dealer network. Appendix 2 contains an overview of the courses available during the first half of 1993. Basically, the provision consists of two main parts: training courses in technology and repair shop organization, and commercial training courses. In fact, the overview provides only an idea of the courses on offer at a particular point in time. The composition of the programmes is not fixed, but is very flexible and changes depending on requirements. Like GM, BMW can also generate new courses quickly whenever new developments require it, and, as with GM, the new technology is usually covered in new courses, which are then incorporated in the programme as long as there is a demand from dealer businesses. BMW has a longstanding tradition of training in technology, particularly electronics. It has always been a leading company with regard to the application of new electronic technology, and the organization has assimilated this new technology more than any other. Many BMW mechanics are now quite highly qualified in this field and the emphasis in in-service training currently lies more on follow-up training and keeping up to date with new applications, than on basic training. However, when it is needed, attention is also focused on this.

As regards technological training courses, the BMW training provision has a particular structure:

- Basic knowledge is acquired in an Elementary Electric/Electronic Skills course, which deals with the basic concepts, basic components, electrical switches, the operation of electrical systems and the systematic detection of faults. The course lasts 4 days and is open to every mechanic. It is aimed particularly at older mechanics or younger mechanics with lower vocational training (LBO) who have no knowledge of electrics/electronics or have "forgotten

this to some extent". For a long time the business ran the course itself, but recently it contracted the training out to INNOVAM, where two course groups are currently following training. Mechanics completing the course are awarded INNOVAM's BTE-O certificate. Interest in this basic course has declined because most employees have now had sufficient basic training.

- In addition, there are the courses on various systems specific to different makes, for example engine management, safety systems (ABS, ASC+T, EDC, airbag, etc.), automatic transmission, car audio systems and alarm systems. The courses, on specific BMW technology, usually last 2 days and are intended for employees who have to work on and with these systems (fitting, detecting faults, doing repairs).

- Two training programmes are offered for specialized jobs in the BMW repair shop: for the BMW Diagnostic Technician and BMW Service Technician. These two programmes are both rather longer, and are open to a limited number of employees selected by the dealer and the importer. The two programmes are linked. In order to become a Service Technician, one must first follow the programme for Diagnosis Technician. We will return to these two functions below.

- Finally, there are also the introductory training courses for new models.

The courses are virtually always given centrally at the BMW training centre, and mainly make use of course materials developed at the centre. In educational terms, most courses adopt a problem-oriented approach ("we do not train in an academic way, but are strongly geared towards particular problem areas ... the academic approach is impossible and doesn't work"), with an emphasis on practical exercises. In general, the ratio of theory to practice in a course is 30 to 70 per cent. Practical tasks are carried out in groups of 2–3 mechanics. A course group comprises a maximum of 10 people, ensuring that as much attention as possible is devoted to everyone. Courses in new electronic systems are usually based on problems which are closely related to those confronting mechanics in practice:

- What is the system and where is it found? In which models? In which cars?

- How does the system work? How is it constructed? What are the underlying principles?

- How do you test it? How do you arrive at a diagnosis? What equipment do you use? What method do you use?

- How can you take it apart and put it back together?

- How can you repair it? How do you adjust and tune it?

- As a mechanic, what do you have to be careful with, or not touch?

The courses are not so much aimed at increasing the knowledge of or skills in electronics in order to repair electronic devices, but above all at imparting knowledge of electronic applications and skills to enable mechanics to use testing equipment, to locate faults quickly, establish the causes of faults and if necessary replace components. Repair shop diagnosis (technology, methods) is aimed primarily at replacement and not at the repair of components. Mechanics should be taught primarily how they can ascertain which components need to be replaced.

This system of external courses is supplemented by a system of self-training with the help of interactive video in the dealer businesses, the SIP system. When BMW markets a new technological application, the manufacturer makes a video tape of this which dealer businesses can use for instructing their personnel. This instruction is always interactive. Firstly, mechanics are always given an explanation of how the system works. This is followed by a series of questions to test whether they have understood the explanation. If they have, the tape goes on; if not, the theory has to be studied again. All in all, a collection of about 120 video tapes has been produced over the years, and at least 95 of these are actively used in the Netherlands. New tapes are automatically sent to all the dealers with a short explanation, and use of the tapes is mandatory. One employee – the SIP information employee – is appointed in every dealership to manage this system and ensure that the tapes are actually used. These employees are in turn supported by the training centre, for example, at regional evening meetings. The training centre has two reasons for working with this video system. It enables the whole dealer network to be familiarized rapidly with the latest systems (so that the mechanics know how they work, how to operate them, how to test them, how to tune them), so that the personnel can answer the client's questions even before they are fully trained. Secondly, the video tapes are a good preparation for mechanics who are going to follow courses at the training centre. For every technological course the training programme indicates which SIP tapes must be viewed in advance to prepare for the course. To give an example, for the course on safety systems, five video tapes should be studied, dealing respectively with Airbag, ABS, EM I, ASC+T and EDC. At the start of a course the mechanics are tested with questions to make sure they have actually viewed the tapes. If it becomes clear that they have not,

they are not permitted to follow the course. This form of interactive video training has been used by BMW in the dealer network for 10 – 15 years. For a long time, BMW was unique in this respect, but now other manufacturers have also adopted the system.

Appendix 2 contains some additional information on the content and structure of the BMW Diagnosis Technician and BMW Service Technician training courses. These two programmes are part of a BMW career course which is structured as follows:

- At the bottom of the ladder there is the ordinary mechanic. This mechanic comes straight from school and receives in-service training for specific BMW technology at all sorts of BMW-specific courses. A new employee can become an all-round BMW mechanic in two to three years.

- After three years of BMW experience and training, this all-round mechanic can progress to the first rung: the job of Diagnosis Technician. To do this, the mechanic has to follow the 10-day Diagnosis Technician course. The course concludes with an examination, and the mechanic receives a certificate recognized throughout the BMW organization. The new Diagnosis Technician agrees to take follow-on courses after the basic training.

- After working as a Diagnosis Technician for 18 months, he can progress to the second rung: the job of BMW Service Technician. For this the mechanic follows the 8-day Service Technician training courses in which he is initiated into a number of specific, less common electronic systems (e.g., bodywork electronics, electronics for seats, mirrors, etc). In addition, he completes sections on repair shop organization and customer relations. The Service Technician is the "super mechanic" in the BMW organization. He is not only a specialist in more difficult repairs, but can also act as a troubleshooter and as the "super-technical" right hand of the repair shop manager. In many dealerships he replaces the manager when he is absent. This training also concludes with a certificate recognised throughout the BMW organization.

The importer advises every dealer to train at least one Diagnosis and Service Technician. In principle, the courses are open to mechanics with any preliminary training, and both employees with an intermediate technical school education and those with a good lower technical school education can participate. The determining factor for admission to the career programme is not the mechanic's preliminary training, but the actual capabilities that he has demonstrated in the business ("What he can do and what he's like"). The dealer and the importer's area manager decide in close consultation who will follow the training courses. The dealer has the final decision on the matter. Currently most dealer businesses employ one or more specialized technicians, but they are also faced with a high turnover rate in this group. Specialist BMW mechanics are highly valued in the motor vehicle sector and there is a great demand for them in the labour market. The Diagnosis Technicians in particular often change jobs, whilst the turnover rate is lower amongst Service Technicians. The latter often have a stronger commitment to the BMW organization, and in many cases also work in management and organization. As such they often have a higher status in the business.

The BMW training provision is also very flexible and the provision of technical courses for specific makes is constantly updated and adapted to the developments and requirements of the market. In general, the provision includes between 12 and 20 different sorts of courses. Recently, new courses have been developed for Modic and the Modic loading station, and for a new type of electronically regulated diesel engine. In order to identify the need for new courses, the training centre uses information from different sources. In the first place, it obviously consults information from the manufacturer about new models, new types of engines, new regulating systems and so on, so that it can respond promptly to the latest developments with new training provision. In addition, the centre accurately records and analyses actual participation in existing courses. This reveals any gaps which may exist between demand and supply and which require an expansion of the existing provision or perhaps a new provision. Furthermore, technical information is provided by the department which records the work carried out under warranty. An analysis of this work under warranty can also give indications of possible gaps in the knowledge of dealer businesses. Finally, it is worth noting the important role played by external technical department area managers in in-service training. These area managers, who are employed by the importer, form a sort of liaison between the training centre and the dealer businesses in a particular area, and in this capacity they have various useful functions. They can stimulate and advise dealers and alert them to the existence of new courses. They can discuss training policy with the dealers and help to decide which employees can follow which training programmes. They can reprimand dealers for a relatively low participation in courses. They can deal with any questions the dealers may have after the courses and supervise the follow-up in the business. They can identify gaps in knowledge and training requirements at the dealers, and pass these on to the training centre. This information can also be used for adapting existing courses or developing new ones. The importer is quite satisfied with the way in which this system functions in practice.

4.3 The employees' training activities

4.3.1 Training activities in the Opel companies

The actual use which the dealers make of the importer's training provision is determined in part by the arrangements made on this matter in the contracts between dealers and importers. In the GM organization the training of dealer personnel is regulated globally. The dealer contract contains a provision on this, but the importer does not make the training courses compulsory. GM adopts an open approach and the dealers can enrol mechanics themselves. Every six months the training centre sends the dealers a course catalogue describing the (new) courses and including enrolment forms. In addition, the training centre uses a sort of call-up system. It keeps its own record of people following courses, carefully recording which employee from which business has followed which courses. Every new employee enrolling for a course is entered in this record and if he is enrolled for a programme, for example the electronics cycle, he is automatically called up for follow-up modules and repeat courses after completing the first course. Dealers are expected to pass on information on new appointments and on internal transfers, for example from the repair shop to stores, so that the employees concerned can be called up for a different training cycle. If employees who are enrolled for a course leave the business, or if the dealer does not consider any further training to be necessary, the training centre is informed of this. Following consultation, those involved may then be removed from the call-up system. Every dealer receives a survey every year of the courses followed by his employees at the training centre during that year. The employees themselves receive a GM training passport, a document authorized by the importer which records their whole training career. The passport records every new course that is followed giving a short explanation and stamped by the importer. Employees can use this passport to show which specific qualifications they have gained in addition to their normal education.

This system enables the importer to put a certain amount of pressure both on the dealer and his employees to participate in in-service training on a regular basis. There are no real sanctions on failing to participate fully, but certain steps are taken. If a dealer enrols too few people for in-service training, the dealer involved is alerted and he is advised to show more initiative. Dealers who still continue to respond inadequately run the risk of losing the benefit of the importer's support facilities and being unable to avail themselves of the importer's service support group in the case of problems of a technical nature.

The business that was studied also actively participates in the GM system. On average the employees in the Opel garages currently follow 4–6 days of in-service training per year with the importer. Every year at least 40 employees participate in the in-service training. Some of this involves training courses from the electronic cycle, but more often employees take courses in special technology and, more recently, courses related to the introduction of new models (Opel Corsa). The courses are followed by all sorts of groups of personnel. Three separate groups of employees were sent to a recent Corsa introductory training course:

- a group of mechanics who have followed the electronics cycle and do a great deal of electronics work;
- a group of mechanics who are mainly involved with mechanical work and are not following the electronics cycle, but who have still been enrolled by the business "to try and overcome the fear of new electronics to some extent" and "to motivate them a little";
- the repair shop managers and receptionists for whom a separate course was developed with a greater emphasis on the testing equipment.

It was stated above that the in-service training for Opel mechanics is currently at a slightly lower level than between 1987 and 1989. At that time the employees received an average of 11–12 days' training per year. However, this was aimed at helping the personnel to catch up on their lack of knowledge in the field of electronics, and to a large extent the business ran these courses itself. Following this catching-up operation, it was possible to gradually decrease the number of training days.

Every branch decides for itself which employees will be enrolled for the electronics cycle, usually following mutual consultation between the repair shop manager, instructor/training coordinator and the employee concerned. In most cases these are new employees who have been working in the business for some time and who are in some cases still following their training as a mechanic, but at a certain point need a basic knowledge of electronics, for example, because they are going to use a particular piece of testing equipment. These enrolments are always accepted by the training centre. There are no specific preliminary or training requirements, though a test is given at the training centre after the first day of the course to determine whether those involved have sufficient aptitude and are adequately motivated to complete the course.

4.3.2 Training activities in the BMW companies

In the BMW organization in-service training has a much more compulsory character than in the GM organization. The BMW importer requires all its dealers to ensure that every mechanic attends the training centre at least four times a year. Mechan-

ics have a compulsory minimum of five days in-service training per year. For supervisory personnel and managers there is a compulsory minimum of 2.5 days per year. In addition, every mechanic must spend a minimum of 12 hours a year studying tapes from the interactive video system. Every new employee in a BMW business must follow the 4-day BMW introductory training. All these obligations are contained in the dealer contract between the dealer and the importer and failure to observe the contract provisions can lead to stringent sanctions. The BMW organization has a sort of bonus arrangement which entails that dealer businesses who have "done their work well" can count on a financial incentive. Whether or not they have achieved the minimum number of training days, a fact which is screened by the importer's service managers, is one of the factors which to a large extent helps determine whether or not the bonus is awarded. The training participation of the various businesses is carefully recorded by the importer. Dealers who have a relatively low participation are immediately cautioned by the manager responsible for their area.

The business receives an updated training catalogue from the BMW importer every six months, describing the provision and containing enrolment forms. The repair shop managers in the BMW garages then make a selection and, in consultation with the training coordinator, decide which employees will attend the various courses during the following six months. They review which courses employees have already followed, where the interests of the mechanics lie, and what may be necessary in view of developments in the type of work coming in. The enrolments are then made on the basis of these considerations. Mechanics can also state their own preferences, and can enrol for more training days than the compulsory number. However, if a mechanic exceeds his five days, the business does ask him to give up some ATV days, that is, the extra free days to which he is entitled on the basis of a collective agreement on the reduction of working hours in the sector. In general, the two BMW branches of the business do use up the number of training days; in recent years mechanics have followed an average of 5–6 days of in-service training per year with the BMW importer. Altogether this has involved some 20 employees, in addition, several employees have followed courses for specific technology, e.g., an LPG system installation course with the supplier of motor vehicle gas systems.

The business studied here makes frequent use of the video training system. It is managed by the training coordinator, and new tapes can be viewed at the business's own school. In the past the training coordinator used to draw up a timetable for this video training, but this did not work in practice, and now it is left to the mechanics themselves – at least in the large BMW branch – when they wish to watch particular tapes. The training coordinator tells everyone who has enrolled for a course which tapes he must study to prepare for the course. A different system is used for the mechanics in the smaller BMW branch. For these employees there are weekly group meetings (5–6 employees) during the winter months. These are held in the classroom and are led by the training coordinator. New videotapes are watched, and any questions or problems which arise are discussed. According to the training coordinator, these meetings, which take place in the evening on a voluntary basis, are well attended.

At present there are one diagnosis and one service technician employed in the large BMW branch. In addition, one other employee was recently enrolled for the diagnosis technician training because the business did not want to be entirely dependent on one employee. The repair shop manager decided who should be chosen for this. Recently the two longest-serving mechanics from the smaller BMW branch were also enrolled, at their own initiative, following consultation with BMW's service manager. In the businesses these specialized technicians are used more often than other employees for fault detection. This forms the core of the training. These technicians' product knowledge is greater than that of the other mechanics. In addition, they more often work directly with the customer.

4.3.3 Evaluation of the employee questionnaire

In order to gain greater insight into training, and the participation of personnel in the last 5–6 years, a random sample of employees in the Opel and BMW businesses was given a written questionnaire which asked them to indicate which in-service training courses they had taken between 1987 and 1992, which subjects had been dealt with, how long the courses had lasted, whether they had taken place in or outside working hours, where they had taken place, and whether they had concluded with a certificate. The questionnaire also included a certain number of personal questions and questions relating to the job (age, preliminary training, duration of employment, position in the business).

Altogether 19 employees completed the questionnaire, 9 from the large Opel business, 8 from the smaller Opel business, and 2 from the large BMW business. They were all technical personnel.

A few other facts about the group are given below:

- 3 employees were under 20, 5 between 20 and 30, 6 between 30 and 40, 5 between 40 and 50; there was no one over 50;
- 15 out of the 19 had followed an apprenticeship training for mechanic or chief mechanic,

two employees who were still apprentices had a lower vocational education (LBO), whilst two other apprentices had a lower general secondary education (MAVO);

- most had been employed for a long time: 7 between 10 and 20 years; 4 even longer than 20 years; 8 employees had been employed less than 10 years, 2 of these less than 1 year;

- the group reflected a variety of jobs; 3 were apprentice mechanics, 4 were mechanics and 5 were chief mechanics. There was also 1 commercial vehicle mechanic and 1 LPG technician. There were 5 people in management positions: 1 receptionist, 1 service technician from the BMW business, 1 foreman from an Opel business, and 2 repair shop managers.

Without claiming that it is representative, it is possible to state that the composition of the group is a reasonable reflection of all the personnel in the business.

A study of the courses followed shows that the large majority of these were technical in-service training courses, mainly in the field of motor vehicle electronics. Altogether the 17 mechanics who completed the questionnaire (not counting the repair shop managers) had followed 114 in-service training courses, of which only 5 were concerned purely with mechanical activities. The other courses mainly dealt with electronics, or had a significant electronics component. Most employees followed a similar programme, though the chief mechanics in general followed more courses, as well as a greater variety, than the ordinary mechanics. The most common courses in the past few years include: Opel Basic Electronics, Digital Injection Systems, Electronic Measurement Technology, Motronic Repetition, Ecotronic Petrol Injection Systems, and various introductory training courses, e.g., for the Opel Astra and the Opel Vectra. Most courses were 2-day courses put on by the GM training institute, which could virtually all be followed in working hours. With one exception, the apprentice mechanics did not mention any in-service training courses. In the past few years they have concentrated on their vocational training. Altogether the 19 employees who participated in the questionnaire spent 283 days training between 1987 and 1992; this works out at an average of slightly more than 15 days per person. This does not actually include the time which some employees have spent on the training provided by the business itself (40 evenings spread over 2 years) and the time which the apprentices and some of the management employees have spent on their vocational training over several years.

Some employees, mainly management personnel, reported higher than average training activity. We studied these employees separately to give an indication of the training efforts required for pursuing a career programme:

- Following his lower technical education (LTS) in motor vehicle technology, the service technician, who is also the foreman in the BMW business (aged 33), first followed INNOVAM's training for chief mechanic after entering employment in the business. Between 1986 and 1988, he took a number of in-service training courses in BMW technology. In 1990/1991 he followed BMW's Service Technician training, as well as several supplementary courses in repair shop management. In 1992/1993 he took part in BMW's training for engine management and electrical systems;

- After leaving school, the repair shop manager in the smaller Opel business (aged 35) first followed INNOVAM's training for chief mechanic. Between 1985 and 1988 he followed various vocational training courses in the electrical area: a written basic electrotechnical course at a private training institute and INNOVAM's two-year vocational training course for Chief Motor Vehicle Electrician. In addition, he was awarded INNOVAM's LPG technician diploma in 1990 and the Motor Vehicle Business diploma in 1991. Furthermore, during the years 1990–1992 he frequently took part in the GM training institute's in-service training courses, totalling approximately 20 days.

- The repair shop manager of the larger Opel branch (aged 29) has also had a considerable amount of training. After lower general secondary school (MAVO) he took INNOVAM's vocational training course for chief mechanic from 1980 to 1985. In 1987 he followed a one-year written course in electronics at a private institute. Between 1990 and 1992 he followed INNOVAM's three-year Technical Management training course, and was awarded the diploma. He has also taken 17 in-service training courses at the GM institute since 1987, mostly 2-day courses in electronics. Apart from his vocational training he also had 31 days of in-service training during this period.

This information shows that a great deal of in-service training has been undertaken at every level of the business, and that the management in particular has achieved a broad range of qualifications in the past few years.

4.4 Costs of continuing vocational training

For both GM-Opel and BMW the in-service training courses at the importer's training centre are at the importer's expense. Any travelling and accommodation expenses must be paid by the

dealer business. In addition, the dealers obviously face costs resulting from loss of working hours. In the business studied here, for the Opel garages these costs have amounted over the past few years to an average of: 40 employees with an average of 6 days' training at NLG 85 per day = NLG 20,400, and for the BMW garages: 20 employees with an average of 5 days' training at NLG 85 per day = NLG 8,500. In addition, there are usually also the costs of renting a car because one of the business's cars is used for travelling to the course, i.e. 340 x NLG 40 per day = NLG 13,600.

The business receives a reimbursement from the sector's training fund for one day of training leave per year for every employee. In total this involves approximately 180 employees. Therefore in principle every employee can claim one training day, but not all the employees take advantage of this right every year. Mechanics take on average more than one day's training a year and require significantly more days of training than, for example, administrative personnel. Thus in fact they use up part of the rights of other employees. In order to prevent the ratio from becoming too disproportionate, the business has therefore determined that mechanics who wish to follow more than 5 days' training per year must make their own contribution to the costs in the form of using ATV days for the training. The number of extra days (over 5) that they follow training is deducted from the number of their ATV days. The business has had this arrangement for a long time and it has rarely led to any problems in practice.

4.5 Participation of social partners and trade unions

As a company with more than 100 employees, the business has a legal obligation to establish a works council (which is co-responsible for promoting the personnel's interests). The works council functions as a sort of "social partner" for the employer at company level. (For more information on the works council and Dutch participation legislation, the reader is referred to the Sectoral Study.) The business concerned here has complied with the obligation by establishing a central works council at the level of the management company. This central works council comprises 8 people, and is composed in such a way that every branch has at least one representative, and that the rest of the members are distributed according to the size of the branch: the largest branch therefore has the most members. The training coordinator is at the same time the administrative secretary of the works council.

The central works council has discussions with the board of directors of the management company, according to a fixed schedule, once every two months. All sorts of subjects relating to personnel matters can come up in these discussions. This is a field in which the central works council has a right of participation. Up to now, the subject of in-service training has hardly come up in the central works council and its discussions because there has been very little reason for this, according to the council's secretary: "It is not a point which the central works council has to consider. There is enough training available. There is good provision, there are good facilities, there are no problems, and you don't hear any complaints from employees. There has never been any reason for bringing it up in the discussions." A subject that does come up in the discussions of the central works council is policy with regard to the recruitment and training of apprentices. The central works council is vigilant, particularly with regard to items such as the supervision of apprentices and the selection of apprentices for vacancies after their training. The central works council has not proposed a training policy plan or a specific training agreement, both matters in which it would have a right to participate. It has never asked for these, though it is currently working on describing the training function in more detail (structure, tasks, training coordinator), and probably a sort of training plan will be developed eventually. This will also be discussed by the central works council. At the moment the training coordinator has too little time to study this systematically.

The business has no official trade union representative. Several employees are trade union members – the training coordinator himself is a member of the FNV industrial union – but on the whole, the degree of organization is very low. Insofar as the trade union organizations are involved in the training policy, this is not so much at company level, but rather at sectoral level. It is especially through their representatives in the sector's training foundation, the OOMT, that the trade unions organizations can exert an influence on training policy and training practice in the sector. (For more information on this, see the Sectoral Study.)

5. Evaluation of the training concepts

5.1 Good practice versus normal practice

To summarize, it may be said that the business studied here can certainly be described as a good example of a company that is active in the field of training. It has a clear policy on training and in-service training, there is a specially appointed training manager, there are good internal provisions and facilities for training and in-service training (the business's own school), the annual number of days' training of most employees is, on average, fairly high, all categories of personnel receive a reasonable amount of in-service training, the business has access to good external

provisions for in-service training in the form of the importers' training programmes, and it can offer employees reasonable career prospects, for example, via the career-oriented training programmes within the GM-Opel and BMW importer organizations.

Various matters examined above are relevant from the point of view of the possibility of transfers to other businesses, including businesses abroad:

- the business's training strategy and the programme it has developed for providing new employees with good basic qualifications;
- the structure, equipment and organization of the business's own school and, closely related to this, the organisation of training within the business;
- the in-service training programmes developed by the business to provide mechanics – particularly older mechanics with fewer qualifications in modern technology – with a basic knowledge of electronics;
- the importers' in-service training programmes to which the business has access, particularly their structure and organization, and the educational methods and materials which are used;
- the way in which an attempt is made, particularly in the BMW programmes, to relate external training to internal training and forms of self-training;
- the procedures and programmes developed, particularly in the BMW organization, to give a selected group of mechanics the possibility of promotion to specialist jobs at a level between management and regular shop floor personnel;
- the procedures used by importers to identify new training requirements and deficiencies in the existing training provision;
- the support which the importers offer for the personnel of their dealer businesses, and to which, once they are back in their businesses, they can always turn when they have questions or problems;
- the way in which relations between importers and dealers are organized, and in which the role of the importers' service managers deserves particular attention.

All this emanates from the basic idea on which the training efforts of both the dealer and the importer are based, the idea that in a saturated motor vehicle market the quality of repair shop service will become an increasingly important instrument for gaining competitive advantage.

5.2 Future requirements of continuing vocational training

The concept of the quality of service is currently gaining ground in the business, and in the next few years the in-service training of personnel will continue to be an important focus of attention for the business. Training efforts will probably be further stimulated by a quality project currently being developed, which is aimed at the business obtaining a quality certification to the ISO-9000 standard in the near future. The effect of this project is that the whole organization is examined for quality aspects, internal procedures and working methods are described more clearly and streamlined, and a quality handbook is being developed for employees. This project could possibly generate an extra demand for the training of management and administrative personnel. It is expected that the in-service training of technical personnel will remain at approximately the same level for the next few years. This is evident at BMW, where there is a compulsory minimum of 5 days' training per mechanic per year. However, it is expected that the same level of training will also be achieved in the next few years in the Opel branches, even without a strict training obligation.

As regards the (importers') in-service training provision, the business considers that the existing provision is reasonably adequate. However, the business has recently informed the importers of the need for developing a special training course for instructors, i.e. those who are involved with training and courses and with the supervision of apprentices and employees taking courses within the dealer businesses. This course should provide instructors with a package enabling them to prepare apprentices or mechanics back at their businesses before sending them off on a course at the importers'. This would ensure that mechanics attain a certain basic level before following the importers' training programme. In terms of content the course should be aimed at the basic aspects of the particular make of car and the basic knowledge of technology specific to that make.

6. Conclusions on good practice and normal practice

An overall survey of the situation described in this case study shows that this is a business which is more active than average in training. The business has developed a clear attitude towards training and in-service training, in which a policy aimed at the broad qualification of new employees by means of vocational training and internal training in the business is coupled with a policy aimed at ongoing in-service training of permanent employees. In this policy attention is devoted not only to higher qualified mechanics and chief mechanics (although these do participate most in in-service training), but also to employees, in many cases older employees, with fewer basic qualifications, who find it more difficult to keep up with all sorts of

new developments and are assigned to the more traditional activities in the business (maintenance, mechanical repairs). It is particularly for these employees that the business has developed its own provision responding to the developments in the type of work coming in and anticipating the importers' initiatives. This self-training system is also used in a creative way to help employees who are relatively behind in terms of training to catch up, before taking the importers' training programmes.

In addition, the business has a training provision which is fairly unique by Dutch standards, in the form of its own school in the business, and an internal training manager. These provisions have also contributed to the number of days training of the (technical) personnel being higher than average. In this respect the training-oriented attitude at the top of the company is also important. The managing director is closely involved in training matters, not only in his own business, but also in the sector as a whole. Amongst other things, he is a board member of the OOMT, the sector's training fund.

The business has the advantage that for in-service training it can cooperate closely with two importers who have very well-equipped training facilities. Both GM-Opel and BMW provide a carefully thought-out, well structured, flexible and adaptable training programme, comprising courses which are directly geared to the specific problems confronting mechanics in their work and making use of all sorts of modern educational resources and methods. In addition, both organizations have developed longer programmes for extra career growth which allow mechanics to qualify for higher jobs in the dealer businesses. Moreover, the links between the training centres and the dealers in the form of the importers' service managers/area managers provide an extra stimulus for both the general manager and for the management and employees on the shop floor. As links between the training centre and the dealer businesses, these external personnel ensure that there is constant reciprocal input. On the one hand, they inform dealers about new courses, and discuss training policy and training practice, while on the other, they inform the training centre of new requirements and of any gaps there may be in the existing provision.

APPENDIX 1

General Motors' training programme (1st half 1992)

• Directors
Directors "Tank-up" seminars
Second-hand car "Tank-up" marketing seminar
L.C.V. Marketing (light commercial vehicles)
Senator sales training
Quality network in the GM dealer business

• The organization
C.S.I. Do-it-yourself package
Small steps to progress
Introduction to the year's new models

• Management
Introduction to the year's new models
Service management I + II
Parts management I + II
Sales management I + II

In-depth training
- Selection discussions
- Team building
- Conflict management
- Presentation
- Negotiation
- Problem analysis
- Financial knowledge for non-administrators

• Repair shop technicians
The electronics cycle
- Opel basic electronics
- Electronic ignition systems
- Electronic injection systems
- Digital petrol injection systems, Part I + II
- Electronic measurement techniques

Electronics follow-up courses
- Chassis electronics
- Interior electronics I + II

Isuzu basic cycle
- Trooper technical training
- Campo technical training
- Midi technical training

Introductory training
- Astra general
- Astra electronics

Additional training for repair shop technicians
- Opel innovation for technicians
- New Opel technicians

LPG Training
- Opel LPG theory
- Opel LPG installation
- Opel LPG practical repeat courses

Specialist training courses
- Automatic gearboxes
- Opel alarm systems
- Opel/Isuzu diesel specialist

Bodywork training courses
- Preparatory work and spraying parts made with synthetic materials
- Preparatory techniques
- Paint spraying techniques

• Administration
Warranty claim administration
D.C.S. (Dealer Communication System) training
The financial manager I + II
Cooperating to succeed
Relating to customers

• Service receptionist
Introduction to the year's new models
Astra technical training
The Elite service receptionist I + II

• The store and the Opel shop
Introduction store employee
Spare parts specialist
Relating to customers
Cooperating to succeed
Complaints are opportunities

• The telephone
Talking to clients on the telephone
GO: Making appointments by telephone

• The sales growth programme
Opel introductory training
Introduction to the year's new models
Product sales training L.C.V.
Product sales training GMAC
Product sales training fleet & lease
Sales skills training
Professional salesman
Presentation/demonstration
GO: Client management
Negotiation
Client-oriented tenders
Sales at the entrepreneurial level

APPENDIX 2

2.

BMW's training programme (1st half 1993)

- Technical development training programme
  Elementary BMW knowledge
  Modic and Modic loading station
  Engine management
  Diesel engine M51 td/tds
  Electrical systems
  BMW diagnostics
  Safety systems
  BMW diagnostic technician
  BMW diagnostic technician continued
  BMW service technician
  Installation of accessories (car audio/alarm systems)
  Automatic transmission
  Gearboxes
  Elementary electro/electronic knowledge
  Installation of bodywork components (doors, bonnet, sliding roof, etc.)
  P-system and timesheets – elementary knowledge
  Repair shop quality and client-oriented behaviour, continued
  Productivity control repair shop
  Repair shop management
  Guarantee procedure
  SIP Information employee

- Commercial training programme
  Executive
  Finance
  Communication
  Business acquisition
  Familiarization with BMW
  Products, general
  Spare parts and accessories

- BMW diagnosis technician
  Intended for: a suitable employee who will be invited to take this course, in consultation with the dealer and the TD area manager

  Subjects:

  - elementary knowledge of electronics
  - use of test manuals
  - engine management
  - use of modic
  - coding regulating units
  - diagnosis
  - place of the diagnosis technician in the repair shop
  - practical exercise
  - final diploma examination

  Duration: 10 days, subdivided into 2 blocks of 3 days and 2 blocks of 2 days

- BMW diagnosis technician continued
  Intended for: mechanics who are diagnosis technicians and have to keep up to date in this field

  Subjects: These are always related to the latest technical developments and changes in the BMW programme.

  Duration: 2 days

- BMW service technician
  Intended for: a suitable employee who will be invited to take this course, in consultation with the dealer and the TD area manager

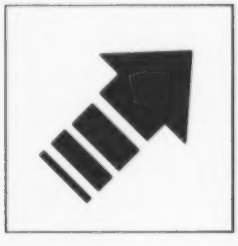
  Subjects:

  - construction of BMW engines
  - engine management
  - electrical systems
  - power steering systems
  - anti-blocking system, ASC, MSR
  - heating and ventilation systems
  - place of the service technician in the repair shop
  - commercial approach and customer relations
  - final diploma examination

  Duration: 6 days, in blocks of 3 days

TRENDS

PART 3:



1. Introduction
2. Trends in the economy, employment and training
3. Normal and good practice
4. Aspects of the social dialogue on training
5. Perspectives

Bibliography

1. INTRODUCTION

In this third and concluding part of the report we will formulate the most important conclusions of our study of the sector and of individual businesses within it. We do so on the basis of guidelines presented by the team coordinating the European study to the writers of the studies carried out in various countries. We begin with a short survey of the most important developments in the economy, employment and training which have emerged from the sectoral study. Then we evaluate how the businesses studied are doing in the light of these developments, devoting particular attention to the "good practices" which they have developed, and which could serve as an example to other businesses, including those outside the Netherlands. Following this evaluation we discuss a number of problems related to training and in-service training, including specific problem areas concerning the six dimensions of the "social dialogue": training plans, needs analysis, target groups of training, training philosophy, training costs and cost evaluation. Finally, the developments in employment, training needs and training provision are examined in perspective and a prognosis is given for the future on a number of points.

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2. TRENDS IN THE ECONOMY, EMPLOYMENT AND TRAINING

3.

2.1 The economy

Following a marked growth in the 1970s and a slight decline in the early 1980s, the Dutch motor vehicle repair and sales sector is now – in the early 1990s – stagnating from a commercial point of view. The sector is faced with a saturated market and falling car sales. The number of cars on the road is still growing, but clearly at a slower rate than in the late 1980s. Demand for replacement vehicles is coming under pressure as a result of the extended life of the average car. The increase in the number of motor vehicle businesses, which was significant until recently, is gradually declining and the growth in employment available will also gradually decrease in the next few years. There has been a considerable increase in competition in the sector in recent years. The profitability of motor vehicle businesses, already fairly low at an average of 2 per cent, is under considerable pressure. As a result of falling profit margins on sales, it is above all the repair shops which will make a more important contribution to profits in the coming years.

In the last 10 years a number of new market players have been successful in this sector. In the first place, there are "specialists", motor vehicle businesses which concentrate on special aspects of work such as exhausts, batteries, tyres and shock absorbers, or bodywork and damage repair work. In general these specialists can work more cheaply, and they are a direct threat to general motor vehicle businesses. In the past few years they have managed to attract a significant section of the market, although they are currently surrendering some of these gains because the general businesses are making desperate attempts to attract the specialist work back again. In the second place, leasing companies are emerging. This actually implies a concentration of purchasing power in the hands of a limited number of market players (fleet owners), and this development could also weaken the position of motor vehicle businesses. Importers and their dealer organizations are traditionally the most important players in the Dutch motor vehicle sector and will continue to be so for the time being. It is possible that the importance of importers will eventually diminish slightly with the establishment of the Single Market and that there will be more direct links between dealers and producers. This could increase the independence of dealer businesses vis-à-vis their importers' organizations.

2.2 Employment

In terms of numbers, there has been a significant growth in employment in the motor vehicle repair and sales sector in the last decade. The economic boom in the second half of the 1980s and the related increase in prosperity have also had a positive effect on the motor vehicle sector. This led to a significant rise in the number of jobs, particularly in smaller general motor vehicle businesses. A levelling-off is expected in the next few years, particularly as a result of falling car sales, technological innovations, an improvement in the quality of cars, the reduction in the number of repair shop hours (less maintenance, longer periods between services) and an increase in the productivity of businesses. It is, however, conceivable that the new environmental legislation currently being drafted will have some positive effects on the employment situation.

In qualitative terms the work situation, i.e., the work in the sales locations and the repair shops, is largely determined by developments in technology and in the market. In the technological field, developments have speeded up in the Netherlands since the second half of the 1980s. This can be ascribed above all to the increasingly intensive use of micro-electronics and computer technology in the cars themselves, in repair shop equipment (measurement and testing equipment) and in the supporting jobs in sales, stores and administration (logistic and office computerization). In the commercial field new market trends are important: the improvement in the quality of the cars on the road, the saturation of the market and the related increase in competition, changes in consumer patterns and the demand for cars in the private sector (greater differentiation, more second-hand cars), more critical consumers, also regarding services and repair work in the repair shop and the introduction of new sales concepts such as, for example, the concept of the "modular car".

The new developments in the technological and commercial fields have resulted in changes in the work coming in and the content of jobs in sales, stores and the repair shop. The changes in the mechanic's job are summarized in the slogan: "from mechanical testing to diagnosis", as formulated by INNOVAM, the sector's training institute. In addition to doing mechanical tasks, mechanics will have in future to carry out an increasing number of electronics jobs and will have to gain new qualifications for this (a knowledge of electrics/electronics, an understanding of systems). In the sector this is clearly viewed as upgrading the mechanic's work (to the present level of chief mechanic) and it was recently decided to stop using the term "car mechanic" to describe the job and replace it by the term "car technician". The changes in the job of salesman are characterized by a move away from "salesman to advisor". In view of the increasing complexity of motor vehicle technology, salesmen will also need more and more basic knowledge of technology to enable them to give customers good advice when choosing a car.

The job structure in motor vehicle businesses was stable for a long time but in recent years new specialist technical jobs have been created in the larger dealer organizations as a result of the revolution in electronics. Some of these jobs are at

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a higher level than that of chief mechanic. These specialist jobs – in many cases for specialist areas in electrics/electronics – are linked to specific makes and are accessible only through the training programmes of specific makes which are held at the training centres of the importers concerned. Examples of these jobs or informal professions include BMW's Service Technician and Toyota's High Tech Master Technician.

As a result of the increased job requirements and qualifications required, it has become more difficult for many motor vehicle businesses to find suitable personnel in the labour market. The traditional source of recruitment, young persons with LBO (lower vocational training), is no longer considered to be of a sufficiently high standard, particularly by the larger dealer businesses. Although the sector is actively engaged in trying to raise the standard of vocational training in the education system, many of the larger businesses still seem to prefer recruiting employees from other groups in the labour market, particularly young persons with an MBO (intermediate vocational) training, and in general from other groups with some further education. Given the likelihood of an inadequate supply of school-leavers with LBO in the future, the sector is also making all sorts of attempts to attract other target groups to the motor vehicle business. In recent years these have included special recruitment campaigns and training projects for "disadvantaged" groups: the long-term unemployed, women and immigrants.

2.3 Training

Not surprisingly, the developments outlined above have also left their mark on the sector's training and in-service training policy. In recent years the sector has attempted to develop a training structure adapted to the new requirements by introducing all sorts of new initiatives. In this respect it has benefited from a number of new developments in Dutch legislation on education which are aimed at making the system more flexible and liberal. In particular, new regulations relating to vocational training offer more possibilities for cooperation between public and private training institutes and between schools and industry. The new legislation has also stimulated a greater commitment from both sides of industry to vocational training, vocational training courses and in-service courses.

In the motor vehicle sector this increased commitment of the social partners is reflected, inter alia, in a number of special arrangements in the area of training within the sector's collective labour agreement (CAO). In this CAO, employers and employees decided to set up a special training fund for the sector, with contributions from an annual levy on the salaries of the affiliated businesses, in order to finance a special arrangement for training leave. Under this agreement a business can receive subsidies for a number of training days per year, equal to the number of its employees on the first of January. In other words every employee is entitled to one day's paid leave for training per year.

Partly in response to developments in the businesses, the employment situation, jobs and the labour market, and partly quite independently of these factors, there have been some important developments in the sector's training structure and policy since 1987:

- the social partners have been assigned a much more central role in policy development; for example, employers and employees are together responsible for the management of the OOMT, the training fund, which is at the same time the most important policy-making body in the sector;
- the sector's vocational training institute has been transformed into a new innovation and training centre (INNOVAM), which is responsible, inter alia, for coordinating the entire training and in-service training policy in the sector;
- a new system of training planning has been introduced, with a new, up-to-date, three-year training plan for the sector drawn up every year;
- a new training system for the sector has been developed which has the effect of improving the coordination of the qualification structure and course programmes in both the mainstream vocational education system and the apprenticeship system;
- plans and arrangements have been made to ensure better coordination between training provided by schools and vocational training institutions and that provided by importers;
- the vocational training programmes have been divided into modules allowing for a greater flexibility of the programmes, and enabling vocational training institutes to offer more custom-made and contract training programmes;
- a number of Regional Practical Training Centres have been opened so that the training can be given closer to the businesses.

With these measures, the motor vehicle sector has created a training infrastructure which compares favourably with those of other, similar branches of small and medium-sized Dutch businesses.

In terms of content the training institutes have also adapted the provisions in response to new developments in the technological and commercial fields. Recently INNOVAM has developed a

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new provision in the field of motor vehicle electronics. This is a basic programme consisting of different modules which is primarily aimed at introducing the basic principles of electronics to mechanics who have no knowledge of the subject at all. The training centres of the importers, who are obviously faced with the new technology in their own makes even more quickly, have also developed all sorts of new training courses and programmes in the field of electronics. In-service training in electronics has to a large extent taken the place of in-service training in mechanical subjects. As far as basic electronics is concerned, this seems to be only temporary. If skills are updated and new mechanics, who already were trained in electronics during their initial education, enter the companies, attention will shift to training in specific, new and more advanced systems and components.

The importers and their training facilities are very important players in the motor vehicle sector's training market. Research has shown that they account for approximately 80 per cent of total in-service training provision. However, the instruction and facilities they provide are accessible only to employees in the businesses in their dealer network. Most importers have also included clauses on in-service training in their contracts with the dealers. Recently discussions took place between INNOVAM and the importers' organization RAI to improve coordination of the importers' training provision, the apprenticeship system and vocational training. The parties envisage a system in which the importers are responsible for training in the new brand-specific technology during the introductory stage of the innovation (e.g., ABS, ASR). Once this innovation has been introduced on a wider scale, it is included in the training provision of the apprenticeship system. At an even later stage, when the new technology has become part of basic motor vehicle technology, attention will also be devoted to it by the mainstream technical educational system. In this way technological innovations will gradually be incorporated in the sector's vocational training provision.

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3. NORMAL AND GOOD PRACTICE

3.1 Main characteristics of the cases

In order to acquire an insight into training policy and practice at the level of individual businesses, case studies were carried out for this report in four motor vehicle businesses:

- a small general repair business and dealer for two small makes: FSO and Yue Loong;
- a small general repair business which is not a dealer;
- a medium-sized main Ford dealer;
- a large holding company, with dealer businesses for GM-Opel, BMW and Mitsubishi.

All four businesses can be considered as good examples in the field of personnel training. They are managed by individuals who are very involved in training, who recognize the need for it, and who have developed a clear vision in this respect. They have access to good facilities and opportunities for on-the-job teaching and training, and can also avail themselves of good external provisions for in-service training. Extensive training programmes are provided, particularly by INNOVAM and the importers. These comprise courses which are closely geared to mechanics' practical experiences, questions and problems in terms of content and educational structure. A broad range of activities is deployed, in which off-the-job training is combined with on-the-job training and mainly both forms exist in a variety of forms. Training and in-service training are strongly encouraged, and the businesses provide ample opportunities and facilities (training during working hours and/or reimbursement of the cost of study materials). The number of days which employees spend on training is clearly higher than average. In-service training is not only limited to the younger, the better trained or more senior employees, but older mechanics and employees further down the scale are also offered programmes and facilities for filling in on a lack of knowledge in certain areas (in particular, basic electronics). In that respect the businesses can also serve as an example for other businesses inside and outside the sector.

3.2 Organization of work

In recent years the businesses which were studied have clearly been confronted with new developments in the technological and commercial fields. The large dealer businesses in particular have had to cope with all sorts of innovations in motor vehicle and repair-shop technology and with modifications in the marketing concepts of their importers. The training and in-service training of employees have proved important instruments for coping with the qualification problems which have arisen as a result of these innovations.

The new developments in technology and marketing policy have up to now had relatively little effect on the organization of labour in the repair shops. In all four businesses the organization of labour was, and continues to be, fairly flexible. After school most mechanics followed vocational training through the apprenticeship system and consequently they are broadly qualified for all sorts of maintenance and repair work. Experienced mechanics are used in the repair shops on a broad range of tasks as all-rounders and carry out all sorts of work on many different makes of cars. The all-round character of the mechanic's job is particularly striking in small general motor vehicle businesses. In the larger dealer businesses there is some distribution of labour, though the "all-round" principle remains the dominant principle of organization there too. Only the large Opel branch and the Ford branch have separate groups/departments for maintenance and repair work.

3.3 Specialization and segmentation

In the repair shops there are various specialists, i.e. mechanics who specialize in a particular type of work in their job. To some extent this is in traditional areas such as damage-repair work, and to some extent these are fields which have arisen more recently in response to the introduction of the new electro(nic) technology. The clearest examples of this can be found in the larger dealer businesses, particularly the BMW business (Diagnosis Technician, Service Technician). In the smaller businesses the more specialized electronic work is usually assigned to one of the mechanics, in most cases a chief mechanic, who has had special training in this field. Most businesses employ one or more of these mechanics with specific training. In a number of businesses, the people in management (repair shop manager, receptionist) have also followed special training in this field.

For the average mechanic, limited training in electronics is thought to be adequate; advanced, specialized training (for instance vocational training in auto-electrics/electronics) is not necessary. Some managers even think it is not desirable. Specialized knowledge and skills, so they say, cannot be made productive. Furthermore, there is always the risk that 'overqualified' workers leave the company for a better paid job. In that case, the return on the investment in training for the employer is negligible.

In general terms it is possible to distinguish between groups of mechanics in two ways which indicate a trend towards segmentation. First, we can differentiate between the 'older' and 'younger' generation of mechanics. The older mechanics left school long ago and have followed traditional mechanics' training programmes, with the emphasis on a knowledge of mechanical techniques and skills. This training devoted very little attention to

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matters such as electrics and electronics and therefore they have hardly any knowledge of this field. In many cases the younger mechanics have followed vocational training which also devoted attention to electronics. Therefore they already have a reasonable basic level of knowledge and are better able to follow further in-service training in this field. The problem is clearly recognized in the businesses (and in the sector) and special programmes have been developed to enable older mechanics to gain qualifications up to a minimum basic level. There are signs that these efforts are not always successful and that the training meets limits, which have to do with the limited learning capacities of especially the lower-educated employees. In some cases the business then can only (re)organize work according to those limited possibilities. The Ford case gives an example of this. The second division is the division between mechanics in dealer businesses and those in general businesses. The former have access to the in-service training facilities of importers, and can follow not only the basic training in the field of electronics but also follow-up training aimed at further career progression. The latter do not have this opportunity. They are dependent on INNOVAM'S training provision, and until recently this provision contained hardly any courses aimed at in-service training in electronics. However, in recent years INNOVAM has laid a greater emphasis on this subject, so that now a good basic training in electronics is also available for mechanics in a general business.

3.4 Regulation of training

The relationship between importers and dealers is very important for the in-service training practice in dealer businesses. At Ford, as well as at GM-Opel and BMW, the dealer contracts contain rules about the in-service training of employees. These rules differ with regard to the extent to which dealers are obliged to provide training and with regard to the sanctions imposed for the failure to observe these obligations. In this respect Ford, GM-Opel and BMW have adopted different policies. Ford is more liberal: the training is provided and dealers can enrol employees as they choose. GM-Opel also gives the dealers the freedom to choose but has its own planning and call-up system, so that once employees have entered the training programme, they are automatically called up for follow-up courses in the field for which they enrolled. BMW imposes the most obligations: dealers are free to choose the training courses for which they enrol personnel, but every dealer is obliged to ensure that employees follow a minimum number of days of in-service training per year, on penalty of losing points towards his bonus.

There are signs that even the more liberal Ford organization wants greater control over its dealers. Ford already follows more closely the performance of the dealers, especially their sales performance and customer satisfaction. If a dealer lags behind on these points, and if he does not offer enough training, then he is explicitly summoned to step-up his training efforts. He then is not obliged to do so, but it is clear he risks losing his dealership if he ignores this. A further essential point is that, at the moment, there is an obligatory relationship between the use of advanced repair-shop technology and the training of personnel. Dealers are free to buy the specific Ford test equipment, but if they buy it they are obliged to give their employees the necessary training. All importers have this obligation.

In recent years, all three of the larger importers' organizations which were studied have developed an impressive programme for in-service training in electronics. BMW did so more quickly than Ford but all three have developed similar programmes. Employees start with a number of basic modules training them in the basic principles of electrics and electronics. If they wish and/or if the business considers it necessary, they can then take follow-up courses leading to qualifications for working with the more advanced systems and components specific to certain makes. In addition, the BMW organization has also developed a career programme for jobs such as that of technical specialist. With these programmes all three importers, particularly GM-Opel and Ford, have carried out a sort of "catching-up" operation in the field of electronics in the last few years and a large number of the mechanics in the dealer businesses have participated in these.

3.5 Training networks

A training network has gradually developed around the businesses which were studied. In this way managers are provided with an extra stimulus to provide regular in-service training for their personnel. In the dealer businesses the importers are the most important party in this network; in the general businesses INNOVAM plays the major role. In one case (Ford) both the importer and INNOVAM play an important role and the networks overlap. In both sorts of network an important role is played by the intermediaries between the training centre and the businesses. In the dealer networks these are the employees of the importer's external service (service inspector, after-sales manager, area manager). At INNOVAM, they are the regional consultants. Both ensure a constant and direct exchange of information between the training centre and the business. This provides a great deal of feedback for the training centre about the quality of its training provision and about any new training requirements which may exist. In this way the business obtains extra information about new provisions and new developments in the policy of the importer or of INNOVAM. This network surrounding the businesses can also be viewed as an innovative practice in the field of training.

3.6 Training and service-quality

The big importers, in particular, relate the actual training efforts primarily to a more general policy to stimulate customer oriented work practices in their dealers' businessess. Ford, GM-Opel and BMW strongly stress the importance of good quality of service to customers, both in sales and in the repair shops. To control the market for their make, importers increasingly control the way their dealers work in their markets. Direct surveys among customers of their dealers (see, for instance, the Ford case) give importers new opportunities for signalling shortcomings in the service and training policies of their dealers.

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4. ASPECTS OF THE SOCIAL DIALOGUE ON TRAINING

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The study devoted special attention to a number of aspects of the dialogue on training and in-service training which takes place between social partners on the European level. These aspects are:

- training philosophy;
- training plans at the repair shop level;
- needs analysis;
- target group;
- training costs; and
- cost evaluation.

Below, we will discuss the conclusions which can be drawn from the case studies for each of these aspects.

4.1 Training philosophy

The concept of the quality of service is an important element of the training philosophy of the businesses, particularly the larger dealer businesses. Improving the quality of service in the repair shop is seen as an important instrument for competition in a market in which product quality and price levels provide fewer and fewer opportunities for achieving competitive advantages. The training as well as the in-service training of the repair shop personnel are both seen as essential conditions of good service in the repair shop. In this respect, in-service training in particular has a capacity for responding to needs and adapting to situations. The basic courses, the follow-up courses and the introductory courses for new models are generally intended to adapt mechanics' qualifications to the new qualifications required in the repair shop. The catching-up operation in electronics in recent years was also primarily a response to new technological developments. However, the businesses consider that in-service training should serve as an extension of good vocational training which provides the mechanics with broad qualifications, so that they can be flexibly used on a broad range of tasks. Therefore, all the businesses in the first instance endeavour to ensure that new employees also gain the greatest possible amount of all-round qualifications through their vocational training.

4.2 Training plans on repair shop level

All four businesses make frequent use of the training provisions of external institutes for in-service training. The general businesses make use of INNOVAM's provision, while the dealer businesses often send their employees to their importers' training centres. In addition, they have also developed all sorts of in-service training possibilities. In small businesses these are mainly informal learning situations in which employees have the possibility of mastering all sorts of new knowledge and skills in an experimental way on-the-job. The dealer businesses have also developed more structured programmes which are sometimes carried out with "educational" supervision. Reference is made here to:

- the in-dealer training courses at the Ford dealer;
- the in-service training programme in basic electronics provided by the GM-Opel dealers;
- the self-training system of the BMW dealers.

One of the objectives of these programmes is/has been to give mechanics who have not yet reached a sufficient standard to follow the external importer's training courses properly a basic knowledge in the field concerned. By means of this link between internal and external training, businesses believe that it is possible to increase the profitability of the in-service training activities.

4.3 Needs analysis

Training needs are not always analyzed in a very structured way, and insofar as they are analyzed, this is done in a different way in small and large businesses. The businesses are not provided with made-to-measure training; they make use of an external provision which is largely standardized, and can choose certain courses from this provision. In making this choice, they usually look not only at the needs of the business, but also at the possibilities and wishes of the employees concerned and at the in-service training they have had before. In small businesses the manager is usually able to immediately recognize the gaps in his personnel's knowledge and the training needs in the business, because he often works alongside them himself in the repair shop. In this case the choice of a particular course can be made quickly. In larger businesses, such a decision usually involves several people. The repair shop manager plays an important role and the instructor is also involved in determining which course is suitable for which employee. In addition, the importer's service manager is sometimes involved in the discussion, particularly with regard to the enrolment of employees for training related to a career programme (see BMW). In consultation with the employees concerned, they jointly decide which course is suitable and when.

Both INNOVAM and the importers have their own methods for defining training requirements and the need for new training provision. INNOVAM receives a great deal of information from its consultants and regularly carries out studies of the needs in each sector. The importers are informed by their external service employees. In addition, they make use of information which comes in through the service support and warranty work departments. One of the importers (Ford) recently carried out a large-scale, systematic research project on training needs. In this survey participation in training and wishes for further training of all dealers were listed. On the basis of the findings, the training programmes were made more modular and hierarchical.

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4.4 Target groups of training

The courses provided by INNOVAM and the importers serve the needs of various different target groups in the businesses. They offer special programmes for technical personnel (basic, follow-up, promotion), for sales personnel and for personnel in management. In certain situations or for certain jobs, elements from these programmes can be combined to create integrated training provision. For example, during the introductory training courses for new models, GM-Opel sales personnel not only receive sales training but are also provided with elements from the technical training programme. Chief mechanics at BMW who can be promoted to the job of Service Technician, not only follow technical training, but also do several modules from the programme for repair shop organization and management because management tasks will be part of their job in the business. None of the businesses have actually made use of the training possibilities for so-called disadvantaged target groups such as the long-term unemployed, immigrants and women returning to work after having a family.

4.5 Training costs

In all four businesses training and in-service training has taken up a considerable amount of time in the last few years (and therefore resulted in loss of production). In a few cases this led to problems in connection with absence due to training, but in most cases the need for training was considered so great that these problems were accepted. Usually the costs of training, including the loss of production, were completely at the employer's expense. Employers are reimbursed by the training fund for one day's training per employee per year on the basis of the sector's arrangement for training leave. In one business, the large dealer business, there is an arrangement which entails that the employees themselves are asked to contribute to the costs if the training exceeds a certain maximum. If employees in this business wish to do more than five day's training per year, they have to give up ATV time (a scheme for the reduction of working days) for the number of extra days.

4.6 The cost/benefit evaluation

None of the businesses systematically evaluated the costs and benefits of training and in-service training. In general, no great need is felt for this. On the whole the costs of training are not excessive, while the return is often self-evident. The mechanics, particularly in the dealer businesses, simply could not do their work properly if they were not constantly updated on the latest technology. One problem which does arise, particularly in the smaller general businesses, is that mechanics often do not have enough opportunity, after they have been to a course, to gain experience in the new technology because there is still too little electronic work coming in. This means that not all courses achieve maximum return. Another problem which faces all the businesses is that well-trained specialists are very sought after in the labour market and when they have followed the training they often leave to go to another employer. In this case, it is the competitor who benefits from the in-service training.

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5. PERSPECTIVES

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5.1 Employment

As stated above, there will be less growth in employment in the motor vehicle sector in the near future than was the case in the past. However, this does not mean a downward trend in employment. On the other hand, the sector does face the problem of a decreasing number of apprentices following (lower) vocational training, as do other comparable sectors in the Netherlands. The decline in the birth rate which started in 1975 means a low number of 16 to 20-year-olds coming into industry in the 1990s. Moreover, there is a growing trend for young people to continue their education. Those who are capable of following higher education tend to opt less often for dual vocational training. The result is that businesses and branches of industry will have to compete for the skills of the scarce apprentices. Up to now the sector has been reasonably successful in maintaining the number of apprentices at a constant level but in the near future more attention will have to be devoted to a labour policy based on a sound insight into the relationship between supply of and demand for apprentices.

5.2 Training needs

According to INNOVAM, exclusively devoting attention to mechanics' technical skills and abilities is by no means sufficient in view of the challenges facing the sector. Growing competition and increasingly critical clients – also as regards technical personnel – demand qualities such as good service, quality awareness, a sense of economy and a feeling for norms and values. In a buyer's market, the customer is king. A business can stand out – in addition to the price/performance ratio of its products or services – because of the degree of service which accompanies the production process. This is why there is a greater demand for more attention to social/normative skills and a wider provision for training courses for the non-technical jobs (commercial positions and managers).

Besides this, it is expected that over the next few years training needs in commercial and management functions will grow. An increase of scale of businessess, a more differentiated range of products, new, more powerful parties on the product markets (lease companies, fleet owners), new forms of business (quick service companies), growing competition on traditional segments of the market, more critical customers and more critical, better educated personnel, will increase qualifications required of sales staff and managers. Importers already offer a lot of training in these areas. INNOVAM has plans to develop new courses.

5.3 Quality of training

The motor vehicle repair and sales sector will have to continue to adapt its training and in-service training provision not only in terms of quantity, but also in terms of quality. As this study has shown, a number of initiatives have been developed for this. We would explicitly like to refer once again to recent efforts to harmonize training provision in the sector. A system has been developed in which the different training programmes, with their strong and weak sides, have each been allocated their own place. In terms of content these training courses are adapted as far as possible to what is needed in this sector. The provision of training and courses of the various educational establishments (LBO, MBO, KMBO and the Apprenticeship System) is composed in such a way that apprentices can move from one form of training to another relatively easily. INNOVAM played and continues to play an important role in this harmonization process.

Various forms of cooperation also exist between INNOVAM on the one hand and the importers on the other hand. INNOVAM is also endeavouring to harmonize the provision in the field of in-service training. Rapid technological change requires mechanics to undergo regular in-service training. Up to now the importers have provided the lion's share of these refresher courses, with brand-specific courses for personnel from the dealer businesses. The OOMT believes that the length of time that manufacturers/importers keep their knowledge in-house is constantly diminishing (OOMT, 1993). This can be ascribed, inter alia, to:

- the shorter life of products;
- the reduction in the time which manufacturers allow for research, design and the implementation of new product lines;
- the standardization of components;
- the obligation to provide satisfactory service.

In the policy of the OOMT, one of the functions of in-service training is to help to reduce the period of time between the innovation stage and the integration of innovations in standard training. This is why INNOVAM is encouraged to play an active role in the field of refresher courses in collaboration with importers. INNOVAM could above all be responsible for the general refresher courses, possibly with some supplementary elements specific to certain makes. For their part the importers could provide specific in-service training for certain makes in their contractual training, based on the general refresher courses.

It is expected that harmonizing training provisions will have a positive influence on the possibilities for meeting changing training needs. In future, mechanics in the motor vehicle repair sector will have more adequate technical in-service training than at the moment. In addition, according to INNOVAM, the harmonization efforts can result in the integration of innovations in standard training

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programmes at an early/earlier stage. More harmonized training provisions can stimulate the development of craftmanship in the sector and can perhaps counterbalance to some extent the segmentation processes (especially those between dealer and non-dealer employees) on the labour market and within the companies.

BIBLIOGRAPHY

ABN-bank (1990), **'Het autobedrijf'**, Amsterdam, Algemene Bank Nederland.

AMRO-bank (1988), **'Op weg naar 1992. De autobranche'**, Amsterdam, Amro-bank Nederland.

Auto- en Motortechniek (1992), **'Special: werkplaats 2000'**, 52e jaargang, October 1992.

BOVAG (1987), **'Samenvatting consumentenonderzoek autobranche 1987'**, Rijswijk, BOVAG.

Economisch Instituut voor het Midden- en kleinbedrijf (1990), **'Het midden- en kleinbedrijf in 1988 en 1989 en een eerste verkenning van 1990. De auto- en reparatiesector'**, Zoetermeer, EIM.

INNOVAM/VAM, **'Jaarverslagen 1987-1991'**, Voorschoten, INNOVAM/VAM.

Krekel, Van der Woerd en Wouterse (1988), **'Opleidingen in de autobranche naar een hogere versnelling'**, Rotterdam, KWW BV.

Krekel, Van der Woerd en Wouterse (1989), **'Bijscholingspraktijk in motorvoertuigen- en tweewielerbedrijven'**, Rotterdam, KWW BV.

Ministerie van Economische Zaken (1992), **'Ondernemen op niveau'**, Den Haag, Ministerie van EZ.

Nederlands Economisch Instituut (1988), **'De BOVAG-branches naar 1992'**, Rotterdam, NEI.

OOMT (1988), **'Evaluatie stimuleringsbeleid scholingsverlofregeling'**, Voorschoten, OOMT.

OOMT (1993), **'Trends in vakbekwaamheid in de motorvoertuigen- en tweewielerbranche'**, Voorschoten, OOMT.

RABO-bank (1989), **'Visie op personenautobedrijven. Ondernemers op het kruispunt van wegen'**, Utrecht, RABO-bank.

Rauner, F. & H. Zeymer (1991), **'Auto und Beruf'**, Bremen, ITB.

Riphagen, Reiche en De Vos (1991), **'Driejarenplan opleidingsbeleid motorvoertuigen- en tweewielerbranche'**, Voorschoten, INNOVAM.

Tillaart, H. van den, **'Bijscholing in de detailhandel'**, Nijmegen, ITS.

Tillaart, H. van den, J. Frietman & J. van den Berg (1991), **'Ondernemen met perspectief. Onderzoek scholing van werknemers in het midden- en kleinbedrijf'**, Den Haag, Ministerie van Economische Zaken.

VAM (1988), **'Autobedrijf op weg naar gestroomlijnde toekomst'**, Voorschoten, VAM.

Warmerdam, J. & J. van den Berg (1992), **'Scholing van werknemers in veranderende organisaties'**, Den Haag, VUGA/Ministerie van Sociale Zaken en Werkgelegenheid.

Warmerdam, J. m.m.v. H. van den Tillaart, J. Ontijt & J. van den Berg (1992), **'Arbozorg in het midden- en kleinbedrijf'**, Den Haag, VUGA/Ministerie van Sociale Zaken en Werkgelegenheid.

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